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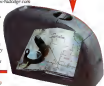
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To make a second home a tax-free moneymaker, buy in a location where you can charge a lot and rent for a short period of time.

—Stephen M. Pollan and Mark Levine

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Franklin Hall in the residence of the 1620s Federal-style house. The results are truly amazing. I was particularly taken with the work done

**Doing the Distance**  
I've been a subscriber since the first issue and enjoy your magazine immensely, so much so that I exclude from additional gift subscriptions in "Fodor's Fodor" (Transformations, March 2001). I was most impressed with the fine workmanship and efficiency of the 1620s Federal-style house. The results are truly amazing. I was particularly taken with the work done

on Franklin Hall. It is a pure example of true dedication and going the extra mile to accomplish something that is wonderfully about.

Thomas E. Jones, Norcross, GA

#### Up & Erect

It is with great care that I pore over the pages of TQJ. Your magazine consistently shows the preservation of old houses and their landscapes, reflecting a sensitivity and respect for their role, form, and function. That said, I can't help but wonder whether you inadvertently switched the before and after shots in the Transformations article. The characterization of the headquarters of Andrew Creek, although it could not be more professionally done, represents a loss of character and identity and appears to be the filling of voids in a level of vision and an artificial character. While the other side of the hill is a level of vision and an artificial character, the result is a landscape design in restoration of natural habitat (planting oaks, removing surface fill, restoring underground water). The Hall has done an admirable job of restoring the character of the Pennsylvania house and has done so with the same dedication and sensitivity. I would prefer the before shot to this one.

The Phoenix, Phoenix, AZ

#### Who Is Out

The question about installing motion locks (TQM Locks for "The Dancers" / Ask Tom, March 2001) caught my attention. As a landscape and a water worker, I should point out that if the down side very old the wood could be rotted or extremely soft, and using a rubber mallet could cause some long-term problems. The homeowner should consider getting a locksmith to do it for him. They may charge him more than he thinks he wants to spend, but if he also considers the amount of time he would be measuring, marking, measuring, setting up the jig, measuring again (you get the picture), he could save himself a lot of money, pain, and time. Because there are 12 doors in the locksmith would probably work out a quantity discount, and water is usually free, so it won't hurt to ask.

James Brown, Silverdale, WA

#### One Step Behind

I don't know why we can't seem to coordinate our projects with your articles, but reading "Raising the Barboard" (Homeowner's Handbook, March 2001) showed us what we need to know next time we tackle a roofing installation project. We recently finished reroofing one room of our 1910 bungalow and, as expected, one of the most challenging parts of the project was to replace the eaves of the building, which the previous owner had removed to accommodate brown painting. We replaced the molding with exact replicas, matching the original fir trim over

though we had to leave several knots out of the wood for profiles we couldn't match at our local lumber shop. Although the rains haven't been too bad, we sure could have used your advice before attempting the project. Our next project is sure to turn out better, thanks to your past Handbook (July/August 2000) on laying panels.

Shirley Paul, Seattle, WA

#### Blown Away

Based on the information presented in the article "The Outdoors" (March 2001) as well as on the show, it is my understanding that the roof deck on the Charleston project is not mechanically fastened to the building. The pressure-treated 2x6 sleepers, with a 4-inch strip of EPDM membrane adhered to one side, are simply resting "rubber-to-rubber" on the roof. It can be understood not wanting to penetrate the EPDM membrane in order to prevent leaks, but what keeps the whole deck from being blown off in a nor'easter or

strong thunderstorm?

Karen E. Proulx, Jr., PE,  
Chesham, VA

This part of the construction was done after TQJ. It should be noted that the roof deck on the Charleston project is not mechanically fastened to the building. The pressure-treated 2x6 sleepers, with a 4-inch strip of EPDM membrane adhered to one side, are simply resting "rubber-to-rubber" on the roof. It can be understood not wanting to penetrate the EPDM membrane in order to prevent leaks, but what keeps the whole deck from being blown off in a nor'easter or



#### All Boiled Up

I couldn't believe my eyes when I saw the Silver Thomas paper doll (Safety Gear, March 2001). I wish 50 children (and after-school workers) were given the girls' paper doll project, the boys would be happy to get a doll too. That year is perfect for the boys. Of course, the girls will probably want one, too.

Wm. Brown, Aberdeen, MD

Addressed to Letters, The QJ Magazine, 1400  
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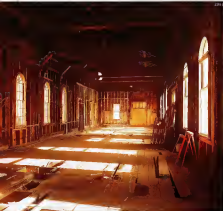
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# OUTTAKES



BEHIND THE SCENES AT THIS OLD HOUSE

BY JORDAN REED



## Station To Station

Both on-screen and off, *This Old House* general contractor Tom Silva and his Silva Brothers construction crew are busy working on several projects at once. But

when it's a hometown of Lexington, Massachusetts, used to help renovating to old train station, Tom Silva has three more to add to another Boston suburb, ready to lend a hand. Follow in a 1911 house, Tom says, "I've always had an attachment to old houses because I grew up in one. I have a strong connection to the station because I have childhood memories of steam engines coming in. It's a renovation that really ties home." The building, constructed in 1917 and currently the last remaining shed kept in Massachusetts (the first

which was built back in 1911) is under an attached awning, reveal the Boston & Maine Railroad until the early 1930s, after purchased it in 1957 and plans to convert the 2,100 square-foot structure into a museum, visitor center, administrative offices and a space for public programs. Tom's crew guided the station last summer but a lot of funds has prevented further renovation efforts. Project without *This Old House* estimate that \$3 million will cover the remaining work, and the Society continues to fund raising campaign to make up the deficiency. For further information on the project donations, and L.H.S. activities, call 781-862-1712.

PHOTO: LARRY LARSEN FOR THE OLD HOUSE; PHOTO: JAMES HARRIS FOR THE OLD HOUSE; PHOTO: JAMES HARRIS FOR THE OLD HOUSE

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## Martha, My Dear

Call it a case of design intervention. Back in the early 1950s, little Yanticaw Elementary School in Nutley, New Jersey, was blessed to have both domestic-delights guru Martha Stewart and interior designer Rob Thompson, owner of the TV show's West Palm Beach project house, as students. Rob, like Martha, says he felt the call of design early on, but the two kids were too busy studying to trade decorating ideas across the aisles. "She was a really smart, nice girl," Rob recalls. "She knew the answer to any question the teacher asked." Rob, however, snaggled the lead in the third-grade Christmas play, beating out Martha by drawing the longer straw. While the loss didn't seem to hinder Martha's later television career, the experience unleashed Rob's lifelong stage fright. "At 58, it's still terrifying for me to be in the spotlight," he says with a laugh about his T.O.H. tapings. Rob, by the way, says he admires the style Martha has deployed in decorating her own homes. "There's a simplicity I like—the look's not overdone."



## Some Like It Hot

The frigid New England winters can put a damper on the local construction business, but Tom Selen has put together an accessory that helps keep the work flowing when the frost hits. If the rain pours down so low that his various tales of crafts, glaze, and opacities crinkle up, Tom warms them in a homemade "bar box." Based on an ice chest his father once designed, the second wooden case, which holds 58 upright tubes, goes on thermal popcans from dual-covered bubble-wrap insulation (available at any hardware store) and a 23-watt lightbulb. Tom wires the light socket to an ordinary cord and plug, which leads out through a hole in the bottom of the box. "It keeps everything at the perfect consistency," Tom says. "And if it's really freezing, you can put in a 35- or 45-watt." His current case measures roughly 20 by 20 by 17 inches, "but you can make it as big or as small as you want," he says, "depending on how much you need to put in." Along with increasing the desired temperature for adhesives, the hot box serves a valuable second function: "Some guys on a set don't have a warm-up cup on a cold day."



## ONE (NOT SO) ANGRY MAN

T.O.H. senior carpenter Norm Abram recently served as a jury trying an armed robbery and assault and battery case. The weapon, which was never found, was said to have been a sawhorse. (The accused man was acquitted on all counts.) Neither the prosecution nor the defense objected to the presence of a tool synonymous with the jury pool, though, as an alibi, Norm was excluded from the final deliberations: "I'm not happy to have been allowed to perform my civic duty," he says.

ILLUSTRATION BY MICHAEL GOODMAN; PHOTO: MARVIN WINDOWS

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# HOUSE CALLS WITH STEVE



2007: A color-by-color bath and closet served as a sitting room in the *Seinfeld* films. The two were merged (above) to create a design-friendly for the elder Mr. Seinfeld, who was a writer.



**One for All**  
In creating a universal bath, tight space and special considerations need not present an aesthetic handicap

BY BARBARA ELLIOTT

**W**hile searching for a house for her extended family, Mary Kelly Seinfeld to the agent a Colonial Revival-style residence overlooking the water in Greenvale, New York. "It was our dream place," she says, but all the bedrooms were on the second floor, which made them inaccessible to her mother at the time, Donna Seinfeld. She has an injured leg and uses a walker and, occasionally, a wheelchair. Fortunately, the Seinfelds' architect, New York City-based Thomas Hensman, dismissed this he could convert a first-floor sitting room, bath, and closet into a bedroom suite with a "universal" bath.

A universal bath is designed to assist the needs of people of all "ages, sizes, and abilities," according to the American Association of Physical Persons (AAP), but the term has come to refer to baths that conform to a set of standards established by the Americans with Disabilities Act (ADA). Prescribed measurements and clearances govern every aspect of the room's layout and fittings in order to accommodate a person using a wheelchair; the largest piece of equipment someone with a disability might require.

While Hensman approached his assignment with an eye toward Donna Seinfeld's needs, he didn't want the bathroom to look institutional. "Making a universal—or better yet—bath attractive is part of the overall mission," says *The Old House* host Steve Thomas. "It should be useful for everyone, including a child, without drawing attention to itself."



PHOTO: STEVE THOMAS



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## HOUSE CALLS WITH STEVE

### PROBLEM

Space was limited. Converting the former bath into an adjoining closet would yield a room measuring only 5 by 12 feet, making it "a tight squeeze to lay areas that need to allow for the 5-foot diameter ADA requires for a wheelchair to turn," explains Steve. Of particular concern were the shower area, the coat to be occupied by a sink and toilet, and the doorway opening. However, risk also had to figure out how to make a wheelchair accessible to Donna, as she should need a wheelchair.

### SOLUTION

Hennrich's first space-saving measure was to specify a pocket door instead of the standard hinged door, a feature recommended by the AARP because a wheelchair user can pull it open and closed easily. The lack of a door swing also allowed Mary to fit a low dresser in the bathroom for extra storage.

After getting the bath and closet, general contractor Joe Vasey filed in the old bathroom doorway. He is as risk-y located the toilet to the new, tiled-in wall. Vasey then widened the old door doorway



The end, medicine and storage cabinets, and rolling mirror are all positioned on short Donna Silverman can access them with ease.

to the 34 inches specified by the ADA, covered the entry for the pocket door, and removed the threshold to smooth the transition between the bedroom and bath.

The most difficult task for a wheelchair user is bathing. Climbing in and out of a tub is not feasible, so, ultimately, it is standing in a conventional shower stall. Here again, ADA guidelines dictated the layout of the bathroom, with no showers. A minimum floor space of 30 by 60 inches is required for the shower, plus a 36 by 60-inch area outside a five-foot radius. Because of its small size, Donna Silverman's entire bathroom, in effect, became a shower, with its catch to block the passage of her wheelchair, should she use it, rather than the garden hose. Mary provided for her.

Vasey had a vinyl membrane over the entire wall floor and ran a up 12 inches on all four walls for maximum water protection. Hennrich chose nubby 4-by-4-inch beige octagonal tiles to cover the floor, wall, and ceiling toward the shower. This of this site after greater traction for wheelchair users than larger ones. "Wall tile was selected in a flatter, soft-spaced tile and was set on

the base, covered with epoxy and silicon trim." As all white tiles would have looked too uniform, Mary says.

Easy-to-use lever-style controls, one each for the showerhead and a hand spray, are mounted at 33 inches above the floor, the ideal height for wheel chair users. The lever back an unobstructed, ergonomic design, which is set at a comfortable 180 degrees on user can't accidentally fold themselves when they lean on the water. These 36-inch-long bars have the width of the shower area. Hennrich aligned the bar at an angle to with them so that they "look like part of the design rather than an afterthought." Vasey secured all bars in plywood backing behind the wall tile, ensuring that each is able to bear the ADA-standard 250-pound load per linear foot—for more than enough to support Donna's weight should she pull herself up by one.

Mary had no trouble finding accurate fixtures that met ADA standards. "No wonder," says Steve. "Today, manufacturers offer many options that are stylish." The white ceramic chair, for example, has an old-fashioned shape, but, because it is a wall mount, it could be installed in the ADA-minimum 37-inch clearance from the floor—the height under which a wheelchair can glide.

## HOUSE CALLS WITH STEVE



it could be installed in the ADA-minimum 37-inch clearance from the floor—the height under which a wheelchair can glide.

### FINISHING TOUCHES

A wall-hung medicine cabinet would have been out of reach to Donna, so Hennrich mounted a 6-

foot-tall mirrored unit between two studs to the side of the sink. The mirror, mounted over the sink, can be angled higher or lower, to suit Donna as whether she is standing or seated. Lying on the ceiling and over the mirror is controlled by a dimmer.

All in all, the result is a happy solution for the family—and for friends, who occasionally use the space in a powder room. Says Donna, "Everyone who sees my bath is jealous because it's beautiful. But they have no idea how it has allowed me to maintain some of my independence."

"The best thing about a universal bath is that it works for everybody," says Steve. "Because of the lower position of the fixtures, even children had comfortable chairs—and making everybody comfortable is what good design is all about." ■

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## HOUSE CALLS WITH STEVE

Once set, an aneroid thermostat under cushions insures of a constant temperature, even controlling the ceiling and household showers are not made under any better.

"It's not enough to ask which physical obstacles someone must overcome today. A universal bath should also anticipate any unforeseen needs in years to come."

—STEVE THOMAS

A single shower faucet is standard for those who need a free hand to lean on a shower to sit. An old-fashioned pump is a choice as shown in this picture.

The seat of this ADA-approved toilet is 19 inches from the floor—seated higher than the standard 14 to 16 inches—as most people who have difficulty standing, transferring in a standing position.

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## ASK NORM

Tips for second-story decks and leaky gable vents

### UNDIDING UGLY UPDATES

Help! Our 1960s ranch house is a pretty good shape, but some of the changes a previous owner made in the early '80s are driving us crazy. For one, the bathroom walls are paneled with pink plastic laminate that has been covered with what looks like two coats of oil! That wasn't enough, the brick wall next to the living room fireplace got the rock, too, floor is sagging. How do we get rid of these difficult refinements without destroying the surfaces beneath?

Don Sousa and Mable Davis,  
San Antonio, Calif.

Pink laminate, covered or not, isn't my favorite thing, either. You should be able to peel it off the wall with our rock-melting difficulty once you've a chisel or nail putty knife under an edge. The real challenge will be removing the residue that shows underneath and to glue the laminate to the wall. The staples may have applied moisture over the masonry wall or used to be here and there.

You'll have to experiment with different tools — a wet paper towel, a paint scraper, an old chisel, a putty knife — means which works best. Skip the power sanders, though. The masonry will put gaps up the wallpaper. Don't worry too much about damaging the wallboard or plaster beneath the masonry. Drags and gouges are inevitable, but they're easy to repair. After you've removed as much masonry as you can, apply a thin coat of joint compound over the entire surface and sand it with an acrylic latex primer. You can then paint, paper, or tile the walls. If the plastic paneling was also used in the bathroom, replace the undraining drywall or plaster with cement board, which makes a much more durable substrate for tile in tub and shower walls.

Our word of caution: Plastic laminate can produce sharp edges when it breaks, so make sure you wear gloves when handling it.

Now for your living room. It's possible that the two were constant over your fireplace back. But it may also be held in place with masonry. Either way, proceed cautiously by prying off one corner of the last rock and seeing whether you can successfully clean off any residue from the brick. If product has it will be so masonry removal and rare, consuming job. You may never remove all traces of the adhesive, and you'll probably damage the brick in the process.

### CRACKS IN THE NIGHT

Our house, built in 1951, is literally keeping me up at night. The bathroom wall on the second floor, adjacent to an attic space, randomly makes a



cracking sound. Any ideas on what's causing the noise and how I can put this noise to rest?

Scott Hawkins, Oak Grove, Wis.

I had the same problem when my house was new, and I was never able to find or find the culprit. Over time, the noise subsided, so I suspect they were caused by shrinkage in the framing.

The cracking you describe seems beyond the usual cracks and grooves, however, and I doubt shrinkage is to blame. After 30 years, your lumber has lost most of its moisture. Unfortunately, tracing the exact origin of noise in a house can be as hard as locating a minor leak in the roof. To maximize the possibilities, take note of what's going on when you hear the noise: Is the wind blowing? Has it been raining heavily? Is there a lot of snow on the roof? If the noise always occurs in right during cold months, for example, it might be coming from your heating ducts as they warm up in cold down. By keeping careful track of a week's habits, you may be able to discover the cause.

### LOW BASEMENT BLUES

I was told that to add two bedrooms in the basement of my 300-square-foot house. The problem is headroom, or lack of it. The distance from the concrete floor to the bottom of the floor joists is just over 5 feet, but local building codes require at least 7 feet of ceiling height between the finished floor surface and the finished ceiling surface. Do you have any suggestions?

Paul Ropert, Lincoln, Neb.

Well, you'll either have to raise the house or lower the basement floor, and neither is particularly easy. Even then, you'll have other problems to solve. Building codes now require that every basement bedroom have a means of emergency escape directly to the outside. Your plan could include a door or a window with an opening of at least 5.7 square feet and a sill no more than 44 inches from the floor. Needless to say, a project like this can get complicated as well as expensive.

Here's another idea: Raise the roof and add a second story. We've found it's usually cheaper to build up rather than out because a new story doesn't require any masonry or foundation work. Building a basement for a structure is often the toughest part of the entire design, but a little creative thinking usually yields an answer.

ASK NORM

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## ASK NORM

### PEAK VENTILATION

The ventilation grille located in the gable ends of our house don't seem to stop wet/dry rain water and only leave grilling inside. Someone told us that the vents are the wrong type. Can you tell us what type of vent is best?

Ann Plummer, Rockers, N.Y.

The downward-slanting louvers on a standard eave-end gable vent do increase water intrusion, but no gable vent is absolutely waterproof. Perhaps your neighbors have a design that works better than the one on your house. If not, I'd install ridge vents and eave-end baffles. These vents, which usually come in 8- to 12-foot lengths, run rid to end along the peak of your roof, drawing air in through attic vents on the eaves. To install them, snap off the roof's shingle cap, then, depending on the roof type and vent model, use a circular saw to slice a 1½-inch hole along the length of the roof sheathing on either side of the ridge. Fasten the ridge vents over this, then replace the shingles. The good thing about ridge vents is that they vent in the same more effectively than gable vents. The bad thing is that in humid locales they may work against you the vice instead of draw it, but that's not an issue where you live. If you do install ridge vents, seal your old gable vents from the inside.

### SAFELY REDUCED

I'd like to build two decks on my house—one at the first-story level and one at the second-story. I know it's important to securely attach the ledger to the house, but the house was built sitting on stilts to support the first. There is no rim joist, and I don't feel that the small cut-off sections of joist that serve as the backing between the ends of the joists are adequate for anchoring the wood. What is the best method for securing the deck to my house?

Mike Guzman, Littleton, Colo.

I'm glad to see that you're paying attention to this critical part of house construction. Your concerns are correct: I joist webbing is not an adequate anchor for a deck, neither is blocking.

Rather than attach the first-floor deck to the house, I'd recommend that you support it independently on concrete piers. On the second story, however, you'll have to tie the deck to the house. For stability I'd design it so that the level of the deck is a step or two lower than the floor. (That is probably a good idea in your climate anyway to lessen the snow piling against the door.)

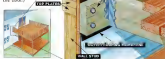


Illustration by Norm

## ASK NORM

Lowering the deck will let you bolt or screw the deck's ledger into the rafters and top plates of the first-floor wall. Check with a structural engineer on the correct number, diameter, and length of the lag bolts or screws you'll need, and be sure to protect the house from water damage by covering the exposed sheathing with flashing or a self-adhesive waterproofing membrane. (See "Building a Safe Deck," July/August 1996)

### POWL PLAY

I have a home on Lake Tahoe that we use intermittently in the summer and winter. Lately, flocks have nested in the eaves, a stained pigeon, and a lot of other plenty of birds. If I bring people around it with around the house, do you think that would help?

Richard Toner, Reno, Calif.

According to Ron Rubebaugh at Cornell University's Ornithology Laboratory, there are a number of explanations for the behavior of these birds, a type of woodpecker. They may be after insects hiding under the siding. They may be chattering on your siding to establish territory and attract



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ment, or they may be actually attempting to make a home inside your house. (Woodpeckers like to make the centers of dead and dying trees.) Some wood-bugs also speculate that the best made by eating insects are even the woodpeckers of a winter and dryer may find birds are eating that wood is waiting to grow with.

As a solution, Kalkbrenner suggests that you first try to exterminate the insects. If you have a lot of insect infestation, then the food source should make your house a lot less attractive to insects of that pest. If insects aren't a problem, you can try hanging burlap-filled Mylar balloons at the trouble spots. Such insect traps have been known to frighten woodpeckers away, but only just partially. Another option is to make your siding less beetle-friendly. Woodpeckers like to make the same spots, so you may be able to deter further damage by covering the damaged siding with insect flashing until the bugs go away.

## KEEPING JOINTS IN GOOD SHAPE

Our house has an outdoor stone patio. To fill the joints, we were told to sprinkle sand over it yearly, but every time it rains, sand comes out of the joints and gets everywhere. Now some of the joints are coming up, too. What is the best way to care for this type of patio? And when sand is necessary, what is the best way to transfer the stones back in place for good?

Bob Peterson, San Luis City, N.M.

Sand is the wrong material to use. Because as granules are scattered, they don't pack together very well, and when it rains, they are easily washed away. That's why on my patio I filled the joints with "stone dust," a crushed gravel that resembles coarse sand but with irregular pieces that pack tightly together. (A tandem vibrator might go by a different name in your area.) I haven't had to touch up all the joints in the seven years since the patio was laid back. In your case, you might try broom or raking the sand out of the joints with a hand trowel, then refilling them with stone dust, which you can work into the cracks with a wide broom.

I haven't had to touch my stones in my patio either, even though there are always a few that get lifted up by the force those cycles each winter. As spring approaches, I make a mental note to raise the worst ones when the weather warms up. But by then, the ground thaws and the stones just settle back into place. If I did have to reset one, I'd take out the stone around it, lift it, shake off or add new stone dust beneath it, then drop it down and replace the joints, tamping the stone level and snug with a rubber mallet. Lastly, I'd water down the patio with a garden hose so that the dust would settle with the stone.

## BOLLER QUEST

With hot gases going up, we've been thinking about replacing our gas boiler, which is probably about 40 years old, and upgrading to a more efficient heat in the spring. Our current system has a single boiler and hot water heater (a separate tank with its own gas burner supplies our hot water). We recently spoke with several furnace-installers about a boiler replacement system, as you would expect, each claim that there is the best. Is there an organization that rates gas hot-water systems on efficiency, reliability, cost, and ease of maintenance? Or is there some way to improve the efficiency of our existing system?

Brianne Rosenblatt, Ewing, N.J.

After weatherizing your house, upgrading an old heating plant is one of the easiest home improvement investments you can make. Your timing for this project is good, too. The best time to replace a system is just after the heating season, when contractors are done with winter-related service calls and aren't swamped with new construction

work. I consulted with The Old House plumbing and heating consultant Richard Trethewey, who can go into more detail.

"Boilers that are 25 years old or more generally have an efficiency of 65 percent or less. In other words, for every dollar you spend on fuel, at least 35 cents of it goes to waste. You can save money by turning the boiler's high limit shut, which controls maximum water temperature, down to 180 degrees or even 170 degrees. Or you can replace the burner and controls. Or give the whole system a thorough cleaning. But spending a lot on our-gas! improvements can be like shopping new cars in a car that's ready for the junkyard. So I think you're right to be shopping for a new boiler.

"One figure to look at when comparing products is the annual fuel utilization efficiency (AFUE) rating. It isn't hard to find boilers with ratings of 85 percent, and some units reach 95 percent. The Gas Appliance Manufacturers Association (GAMA) compiles and publishes the efficiency ratings of gas appliances, including boilers. I am the guide published by the American Association of Energy Engineers. Efficiency lists the most efficient boilers (and furnaces) on the market, grouped by type of fuel and heating capacity.

"For boilers, I've recommended boilers with cast-iron or steel boiler shells. They will easily last 20 to 30 years and have a larger

heat exchanger surface than copper tube boilers, for better heat transfer transfer. Also, if you have a gas-fired boiler, look for electronic ignition—those little pilot lights burn up a surprising amount of fuel. But old heated boilers go for "flame sensors" burners, which are more efficient than older models.

"You might even want to replace your old water heater with an indirect boiler. These superinsulated units are heat supplied by the boiler and are usually maintenance-free. I think they make a lot of sense.

"Choosing a system that matches your house's heating needs is extremely important for fuel efficiency and boiler durability, not to mention for your wallet. If the boiler is too big for your house it will burn more oil or gas by cycling on and off all day. A smaller system will run constantly to keep the house warm in the coldest days of the year.

"The fact that you're not desperate to replace your system should work in your favor, otherwise, but you should still get bids from several contractors. You can put minimums concerns at the bottom of your comparison list, modern boilers don't cost much more than a ready checkup by a heating professional." ■

Send questions to Ask Norm, The Greenhouse Magazine, 1100 Avenue of the Americas, 10th Floor, New York, N.Y. 10020. We'll do our best to answer your questions, but we can't guarantee we'll be able to. We'll do our best to answer your questions, but we can't guarantee we'll be able to.

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LUXURIES



## Eastern Eden

A garden teahouse provides a quiet place to enjoy

*Perching out with a friend in the Rocky Mountain foothills, the husband-and-wife architect Japanese dreams with rock, water, and flowers in a large front yard.*

BY WENDY MOHRAN

W

As his wedding plans unravel away, a telecommunications executive in Crested Rock, Colorado, dreamed of having the ceremony in a small outdoor structure next to a pond he would create in the corner behind his Arts and Crafts-style home. A collector of Asian art and antiques, he was in the process of reconstructing his home and adding a wing with a Japanese flavor, designed by Denver architect Jan Bertold. When the homeowner shared his thoughts about creating a backyard paradise with Bertold, the architect recommended he consult Masao Minoke, a Boulder-based landscape architect who's also a Zen Buddhist monk. "Masao suggested a Japanese outdoor tea ceremony in the corner of a Japanese garden," she swears recalls. Minoke believed the small, open-sided building would not only make a perfect setting for a wedding but also serve the couple well in the long run as a quiet retreat that combines tranquility with refinement.

The traditional arched roof appeared in the 15th century, when Zen Buddhist monks introduced the tea ceremony to Japan. The prototype for the structure was a farmer's modest hut in the woods, each simplicity and naturalness represent the highest form of beauty in Japanese culture. The

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Please see product summary of Viagra (sildenafil citrate) on page 136 and insert on the following page.

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## Pex Appeal

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First rolled sheets of lead also proved to be a poor choice for plumbing material for many years. When the first plastic pipe was developed, it was made from polyethylene, the gold standard for plastic pipe. But polyethylene is a soft plastic, and it's not the best material for plumbing. PEX, the acronym for cross-linked polyethylene, is a different kind of plastic. It's a harder plastic, and it's more durable. It's also more flexible, and it's easier to install. PEX is the new standard for plumbing, and it's the material of the future.

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in a hydraulic radiant system, the tubing is the most important," says Richard Terrell, vice president and heating consultant for The Old House. "You've got hundreds of feet of it running beneath your finished floor, where it's all but impossible to fix or replace. It has to perform flawlessly."

And since its introduction 10 years ago in this country, PEX's performance as a heating element has been excellent. So good, in fact, that plumbers began using it for water-supply lines as well, but they had to radically rethink how those lines would run. With copper, a plumber usually cuts a network of rigid, 30- or 38-foot-long tubes that branch off the main supply line like a network of arteries in the human body. With PEX, he just unrolls a length

of pipe, with deposits inside supply lines have disappeared."

PEX uses its strength and flexibility in high-density polyethylene, a synthetic resin first formulated in 1938 and now the most widely used plastic on the planet—the "poly" stuff made into sandwich bags, disposable cups, and milk jugs. These nonconductive plastics are made of long, strong, flexible chains of molecules (called polymers), but the connections between the chains are weak. Chemists hold off molecules that branch and results in a stronger plastic. That's why it's in ideal material for demanding applications such as insulating underground cables.

PEX begins as molten polyethylene beads. To trigger the cross-linking of polymers, some manufacturers add a peroxide catalyst and extrude the material through a die to form the tubing. Other companies force the polymers to cross-link after the tubing comes out of the die by heating the plastic or treating it with a high voltage electric beam.

For PEX designed to be used in heating, the final step in the application of an oxygen diffusion barrier to the tubing's outside wall. This barrier, an ethylene-vinyl alcohol developed for use as puncture chip bags to keep the contents crisp, blocks oxygen from sneaking through the PEX and into the heated water. Without the barrier, the oxygen starves the water, which would rapidly corrode any steel or iron in the system (like a boiler or expansion tank). Some manufacturers do not

allow it to be used in compact rolls up to 2,000 feet long. PEX can make long runs with no intermediate fittings (see "Attaching a fitting, which quick and heat-free, requires specialized tools and a trained plumber to secure the joint once it's laid."

plish the same thing by stretching aluminum tubing between joints of PEX. The aluminum core also gives the tubing a crisp straightness and the ability to hold a bend, a real virtue in exposed situations, such as radiant heating, when compared to ordinary PEX's droopy demeanor. The PEX used in plumbing applications needs no diffusion barrier.

For all its benefits, PEX does have limitations. It will burn if water becomes acidic, although not as readily as copper. You can't leave one in the sun for weeks on end. "Otherwise you break down the bonds that hold the plastic together, and render it brittle," says Jeff Wiele, managing a systems engineer at Windolux, a PEX manufacturer. And being a petroleum-based product, PEX can burn (but flames, don't flow) if set with a torch. But as Wieden explains, when the tubing is full of water, the chance of ignition is negligible. After further confirmation that the plastic is not a fire safety hazard, Under-



writers LaBrosse is his guess: PEX is simply not approved for use in fire-sprinkler systems.

Surprises worry about what will happen over the long run. Will PEX live its life? They point to another "flexible" plastic, polypropylene (PP), that became widely available in the United States in the 1960s. A host of problems—from poor installation to structural stresses—disintegrated water and oil's plastic fittings—constructed in a 1970 design class-action lawsuit, and resulting lawsuits have since all the collectors. By 1996, Shell Chemical shut down the sale of PP resin for tubing in the United States, though it still sells raw quantities for plumbing in Europe and Asia.

Whether you're certain to use PEX with PP's reliance, the points to PEX's completely different chemical makeup, its quarter-century of good behavior, and laboratory tests that suggest the material could have a useful life span in excess of 300 years. Still, as the work of the PB debate, some plumbers are wary of working with a product that doesn't have

for the entire water-supply network. But water lines branch off to the left and the right, and the cold lines head right. Each tube leads directly to a plumbing fixture, which makes it easy to shut off water lines for repairs and reduces pressure and temperature swings when water is applied simultaneously at different locations.

copper's field-tested longevity. That may explain why PEX still seems close to approval for water supply lines in 15 states, even though the National Foundation, the plumbing equivalent of Underwriters Laboratories, has given it a clean bill of health. But according to

Tom Kenney, a research director at the National Association of Home Builders, it's only a matter of a matter before PEX will be accepted nationwide. "It takes a while for the building code to catch up with building technology," he says.

In Richard's view, what's really holding PEX back from wider acceptance is the lack of a standard way to make connections. "With copper, all you need is a torch and a spool of solder. But right now every PEX manufacturer has its own proprietary fittings and its own proprietary tools for attaching them," he says. "That's a big roadblock for most plumbers in America." He concludes: "The problem is not the PEX—it's just. The value point is at the fittings." ■



directly to a fixture from a manifold on the main supply. There's no need for him to precisely measure, cut, deburr, polish, flux, and solder an on-flow or off-flow fitting every time the piping turns a corner, as he would have to do about 300 or 400 times in plastic or brass with copper. (Some difficulties apply to CPVC tubing, a stiff, solvent-welded plastic also suitable for water supply lines.) He just slides each end of the tube over a brass fitting. The so-called "brazing run" system, in which every fixture has its own dedicated hot and cold water supply, almost resembles the way water in a modern electrical system can directly go to an outlet and light from a circuit breaker panel. And it makes installation a breeze. According to Kallert, who assisted in the installation of PEX plumbing at T.O.H.'s Thorne project in 1997 and the Santa Barbara project in 1999, "the materials cost about the same as copper, but the labor is reduced by at least half."

PEX's flexibility also reduces problems with water hammer, the banging that often occurs in copper piping when a faucet is abruptly shut off. But for Ward Gilbert, a plumber in Mesa, Arizona, the biggest plus with PEX is that it's ultimately easy and therefore safe. Instead of being held in place by rigid joints, PEX moves. "With water in a municipal supply with high mineral content, you react with copper and cause clogging," he says. "Since we switched to PEX eight years ago,

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## Working In Concert

A new generation of Internet-ready appliances cooks, cleans, and shops so you don't have to



BY IAN ADLER

**F**or all the convenience they seem to offer, household appliances are basically pretty dumb. If so one pushes a button, adjusts a knob, or keeps a watchful eye on them, roasts overcook, milk spoils, dishes go uncleaned, and clothes shrink two sizes. For now, the most we can expect after plugging them in is that they work when we tell them to.

But all that's about to change. Using software and chips created by companies like Microsoft and IBM, appliance manufacturers such as Whirlpool and Maytag have begun to assemble a new generation of machines that can communicate with each other and gather information off the Internet. This marriage of computer technology to household conveniences promises to make everyday chores easier, faster, or even unnecessary. "Once you get microprocessors in the appliances, they're able to start doing all kinds of things," says Jon Colucci, chief architect for device software at IBM.

In its most advanced form, this development enables refrigerators to inventory your food and order groceries, dishes to alert you when to clean them, and washing machines to prevent fading and shrinking by sensing what type of clothing is in the tub. In the industry, this scenario is made possible by "perceptive computing," a term that describes the way computer technology is being incorporated into everyday objects around the home. In other words, instead of sitting down with a computer to find ways to cook a chicken

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burner, you'll just touch an LCD screen on your oven, download Julia Child's award-winning recipe for chicken à la king, and voilà, the oven will set itself to the correct temperature. "Personal computing is a natural evolution and extension of the appliances you deal with today," says Cohen. "You will be able to access information at the point of need."

While the appliance that's a combination toaster, croissant, household messages, and virtual leader does not necessarily mean you will be on the market sooner than you think. This fall, Whirlpool plans to roll the Web Tablet, a refrigerator with a Web-linked touch-screen interface. Designed on the idea that helps organize appointments and reminds clients to alert you to the important ones. And in L.A.'s personal-computing laboratory in Arroyo, Texas, there's a prototype Whirlpool refrigerator that hopes to communicate with and prompt other appliances, including TurboChef's prototype com-

"You can reasonably expect that anything in your house that has an on-off switch will one day have some element of intelligence."

—GREG HULLMAN, LEAD PRODUCT MANAGER, MICROSOFT'S WINDOWS DIVISION

munication oven, which features sophisticated electronics that automatically cooking without monitoring the food and a core power chip that allows the appliance chef to upload celebrity restaurant menus and recipes (see "Info Central," page 43).

In a world of smarter appliances, the refrigerator is poised to become the household communication hub, in large part because many families already use it as one. On Whirlpool's Web Tablet, for instance, the show shows how screens will replace the bridgehead of papers and magnets that allow most refrigerators to share news. And thanks to its mail option, parents and kids will be able to post notes from anywhere outside the home.

But a refrigerator that doubles as an on-screen daily agenda for the family is only one example of what can happen as appliances acquire more intelligence. "We're looking at all of our appliances being connected to the Internet," says Philip Reynolds, Whirlpool's vice president of corporate technology and engineering development. The company is working on to even this can be controlled through its own wireless Web network, a refrigerator that can be accessed through your office computer, and a microwave that can download recipes and cooking tips through an LCD screen. In addition, L.E.M.'s personal-computing division is using a piece of that smart, multi-tasking refrigerator to use the Web to update the contents of the lower half of the door, provide shopping lists, pay bills on its screen for review, and which don't let you go to the online store.

The ultimate goal, to create a smart network where appliances

## INFO CENTRAL



communicate with each other as well as with the Internet, from several big brands. The first one is What language will they speak? If a Windows-versus-Macintosh-type battle were to break out between Whirlpool and TurboChef, for instance, progress toward interworking would stall at a halt. To make sure that doesn't happen, computer companies and appliance makers are hammering out language protocols they can use regardless of brand or manufacturer. "If we expect them to be networked appliances, this is never going to get off the ground," says Greg Sullivan, a lead product manager at Microsoft's Windows division.

That's also the question of how the networking wires will be integrated into a house that doesn't already have them. After all, high-speed network connections are still a scarce commodity in American homes. And even if you plan to renovate this year, there's no obvious standard for the kind of wire that will connect these appliances to each other. One option is to install coaxial and dimmy cables in the kitchen and laundry rooms to accommodate the standard that emerges. Another wire wait and see. At least two pre-wired

networking technologies—one based on short-range radio transmissions, another on data embeddings through the telephone wiring—should work without modifying the house.

Once the barriers to communication between these machines are removed, all the country has to be resolved from high-voltage power wires. "One lightning strike could wipe out every appliance in the house," says Allen Gallant, an electrical contractor who works with The Old House. "It would be critical to have a whole-house surge protection in place." (See "Safe House," July/August 1999, page 99.)

To be sure, the idea of a fridge that helps run a household might seem more like something out of a sci-fi novel than a soon-to-be-reality reality. But as proponents are quick to point out that shopping appliances in the world through a home computer seemed just as far-fetched not that long ago. "Personal computing is beyond anything I've worked on in my 20 years," says L.E.M.'s Cohen. "Ultimately, it's going to change the way we interact with our houses." And sure to focus our dumb appliances. ■

## SMARTER WASHING



These days, most laundry goes through cycles that are tightly fixed by a few mechanical levers and buttons. But replacing these with microchips and custom-designed software, as Maytag has done with its Neptune washer and dryer, means that both appliances can be fine-tuned to various clean the load in question. "With these appliances, you can create any kind of cycle you want," says Brett Moore, director of laundry product planning at Maytag.

To achieve this flexibility, the Neptune washer uses sensitive electronics to keep a constant eye on what's happening in its tub. If there's too much sudsing, for example, the tumble pattern will be automatically adjusted and the drum spins extended. The washer also includes a Detergent, a digital list of 80 different stains and corresponding removal techniques. The matching dryer will touch-and-LCD controls, features a software guide to keep clothes wrinkle-free. The Neptune washer and dryer retail for \$2,399 and \$1,299. —L.M.

# Shelf Help

Adding a pantry off the kitchen is a perfect way to maximize food storage.

**W**hen homeowners complain that they haven't got enough kitchen space, it's usually because they're trying to cram in their food. Even if there's a tiny upper cabinet, without sending the canned goods sprawling to the floor. Most kitchens, however, just don't have enough room for storing groceries. Yet when it comes to planning kitchen renovations, people tend to focus on sleek countertops and ice-laden nooks rather than places to store food.

In Grandmother's day, the answer was the separate food pantry, or larder, off the kitchen. "Pantry was very popular before refrigeration, when foodstuffs were made to last for a long time," says Matthew Vederman, an architect in New York City. "Placed adjacent to the outdoors, they were kept at a lower temperature than the rest of the house." A common feature before World War II, the pantry was "lost every time as kitchens were modernized and expanded," says Jeff Proulx, co-owner of the Knauschen Grouping, a custom cabinet and design firm in Maine.

Now, pantries are making a comeback, thanks in part to the boom in warehouse shopping: those gobs of olive oil and 12 packs of macaroni and cheese are messy, but where to put them? A larder's shelves and bins can whisk bulky goods out of the way. In addition to extra storage and quiet storage space, food storage areas can provide extra workstations, such as a marble counter-top for a blender or for rolling out a pie—out in a roomier space for the extra cost. "Wall-to-wall pantries have joined stands as the latest kitchen must-have," kitchen designer Mary Jo Peterson says.

Expanded in extension of the kitchen, pantries also serve the same level of aesthetic attention, including such details as solid wood cabinetry and many of the art hardware like stainless steel drawer glides and door latches. But they also offer a way to serve on kitchen remodeling, Proulx points out. "You can get by with fewer cabinets in the kitchen and use more inexpensive options, such as maple open shelves, in the pantry." No matter what size or shape your food storage area takes, Peterson stresses the importance of flexible design. "I use adjustable shelves wherever I can," she says, noting that you may want to bring custom shelves—those that hold heavy loads or tall, heavy bottles, for instance—into or out of the reach of children as they grow.

An ideal spot for a pantry lies between the home's entry entrance (such as the garage door) and the kitchen itself. That's where the *The Old House* crew placed the 5 by 7-foot food storage area for the Biltmore project house in 1919. "Groceries come right in from the back door, down a short hall, and into the pantry," says T.O.H. contractor Tom Silver. "There's no need to go two steps to the kitchen." Closets and passageways between



The pantry's open shelves store pantry staples like olive oil, and even hold a small refrigerator. The pantry's open shelves store pantry staples like olive oil, and even hold a small refrigerator. The pantry's open shelves store pantry staples like olive oil, and even hold a small refrigerator.

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the kitchen and dining or living rooms—even under-eat space—can be converted, as well. Pantries are typically small, under 100 square feet, but they fill up fast, so you're not likely to expect building one on the large side. You'll want good overhead lighting to see to the backs of shelves and an electric outlet for appliances if you'll have some food prep room. It's also advisable to follow modern and keep a pantry cool, away from broiler elements, so that grains, oils, and bulk produce last longer.

Tom says that pantry cabinets and shelving need to be strong, of solid fir, laminated, or high-quality plywood. "Most of what you're putting in a pantry is heavy, like canned food, bags of sugar and flour, or canned goods that you use only occasionally," he points out. To prevent back strain and it added tons, the heaviest items should go on lower shelves and bins, which should be deep enough (at least 24 inches, front to back) and tall enough (around 30 inches, front to back) to accommodate large-size items. For upper shelves, Peter says bins like the no-bay guard by open shelves but warns, "Don't make them any deeper than about 12 inches, or stuff will get lost."



In the Baltimore house, 70-inch-deep fir shelves are spaced a generous 24 inches apart and 30 inches from the countertop and are supported from edge to edge by strong unglued-on brackets.

In a pantry with high ceilings and open shelving, "a decorative library ladder can be used to extend your reach," she adds. She also recommends lining out tall cabinets with a consistent that call at pull-out to bring stored items within comfortable grasp.

Today, pantry cabinets frequently conceal can racks, full roll-out shelves and bins for bulk dry goods, and heavy-duty wooden lazy Susans. More of these options are available now, due to improved designs of shelves, well-bolstered by shelves. "The hardware just keeps getting better," says Powers, citing heavy-duty, stainless-steel drawer glides that extend fully and mount on the bottoms of drawers so that no metal tracks are visible, and a superstrong ball-bearing pivot assembly for overhead lazy Susans.

In the end, however, Powers cautions homeowners, "Don't compromise on the point where there's no room left for the soap, open access of big shelves. You will need a place for the cereal box." And open shelves can look downright picturesque if you happen to do a lot of home canning. Cochrane would be proud. ■

## FOUND SPACE

If you have no room for a separate pantry, reconfiguring existing kitchen cabinets can provide equally efficient storage. "With a few key accessories installed inside, stylishly can make their kitchen more functional," says Eric Wilson, manager of Riverside Kitchen Center in Wilmette, Illinois. He says, who served as kitchen consultant on the fall T.D.M. TV project in Cheltenham, there are a few smart storage-maximizing ideas: 1. Open, slide-out under-cabinet and a rustic touch to 18- to 24-inch framed or framed cabinets can provide neat, open storage for produce such as potatoes and onions. 2. For deep corner cabinets, at least 30 inches deep and 40 inches wide, there are swing-out systems equipped with two sets of moving shelves. By pulling the door out and then to the side, two shelves fixed to the back of the door become accessible, as do two

shelves mounted in the cabinet's corner—these can be manually slid sideways into the now open space. "This system gives you lots more storage space than traditional lazy Susans," notes Wilson. 3. Pull-outs, available in heights from 24 to 48 inches and a variety of widths, make ideal bins for a standard broom or utility closet cabinet. Shelves are attached to the cabinet door; when opened, stored items can be viewed a fully from both sides. Metal glides are needed only top and bottom, "so the interior space is fully utilized," Wilson says, adding that all the activity in a typical kitchen can be redefined for maximum storage fit under \$1,000. — Mary Luckman



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**KEYWORDS:**



FRANK: Standing in a spot just out of the entrance of Riverport Town, Frank McManis's 1890s River plantation house sits between two neighboring buildings that have remained and another that hasn't. When Frank bought the house in 1993, it required a complete overhaul (p. 105).



## Louisiana Purchase

A novice renovator takes on an overlooked gem in an up-and-coming Baton Rouge neighborhood—and finds his calling

**"E**

veryone was questioning my sanity," says 26-year-old Frank McManis, recalling the day four years ago when he decided to renovate a condemned New Orleans house in Baton Rouge, Louisiana. "But once I finished the project, I can't tell you how many calls I got from people wanting to know how to get old houses in downtown."

It took six months and \$100,000 to transform the neglected 1890s structure into a show piece—an amazing accomplishment, says Frank, began with the most unknown task: experience. "I didn't even own tools when I bought it," he says sheepishly. "The most I had ever done was replace some wall paper in a house owned by a girl I was dating." For Frank, experience was a salvation. Had he known where to expect, he might never have bought the place. He got a lot for \$12,800 from a friend, a local architect who then continued on the project. "I really liked the idea of a historic home—the high ceilings, strong old architecture," he says.

But there was a major problem, and it didn't take experience to spot it: The 2,100-square-foot house was divided up by the previous owner into seven 300- to 400-square-foot apartments, each with a small kitchen, bathroom, and bedroom. "It would be tedious to call them modest apartments," says Frank. The entire back half of the house was caving in, and rooms had made Swiss cheese out of the pine timbers, studs, floor and wall boards—everything except the poor man's cypress joists. All the existing plumbing, electrical, and wiring had to be replaced. For such a still-co-thriving neighborhood, says Frank, "you need a lot of perseverance."

A Baton Rouge native and the son of a local Louisiana state representative, he translated



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come people into action by relying on his house project and plotting the rules of renovation on the original Times, Susan Raveg's second-story neighborhood. There, government buildings used next to stores, hotels, and restaurants and seemingly well-maintained old houses. While some local houses the way they did-up homes and back streets low as cuban bights, community development projects the day on for an outpouring of historic residential architecture and its proximity to business.

The first phase of the project involved demolishing the apartment substructure. Working with Aaron Smith, a high-school friend who met also a mentor, Frank spent over a month getting the place. They tore out the old concrete pipe floor at the kitchen and bath rooms, and he led the ancient iron bathtub out to the street. They ripped away the concrete walls and began patching the pipe floor underneath. Along the way, they unearthed a few gems: "We found the remains of the original carpenter on the roof boards, and a rat's nest made entirely of old phone at the attic," he says. But the most remarkable discovery was the original floor from the 18th century. "It was just lying up and a corner of the living room. It still had the heavy 18th-century glass and a grid laid from the address number." The men closed and installed the surface stone a new floor, doing which they refired out of old growth cypress salvaged from the house.

In these early days, Frank made his share of blunders: "For the first three or four months I didn't know what I was doing," he says. For example, while he was working, he accidentally assumed that all the walls in the house were plaster and gypsum. "I'd spend 40 days freeing up new walls and then send back from them and realize the walls were two or three inches out of plaster, and it looked

like a hurricane had knocked the house sideways," he laughs. "Eventually, a good friend of my grandfather's in a senior center who would come by and right everything we had spent the week doing wrong," he adds. "I learned quickly to remove every thing carefully—the sealing of the original construction is built out and supported in every old house."

As he framed, Frank faced substructure to address the sagging back wing. The structure had a second level—known as a cantilever—added into the first story in the 1930s or '40s. The structure built a creek, so it was built on stilts for flood protection. But the joists underneath the back of the house had so much rot damage they couldn't support the weight of the upper floor, gradually the ceilings began to cave and the walls began to buckle on the rear wing. First Frank tried ceiling as a lever—a door was he severely regrets. "He showed up with only a hand-jack and a lever. He might as well have been speaking made out on the house," he says. "But I happily signed over a \$3,000 check on him for releasing it, and he went on his merry way." With that full-on release, he tried a radical solution. On the advice of his architect, he removed the roof and second-floor addition of the rear wing, leaving only the first-floor walls, to create a 16-foot-high, 800-square-foot courtyard (see "Secret Garden," p. 54).

Inside the house, Aaron and Frank set to work patching the damaged joists and grooves quarantined pine strip floor throughout. The last challenge was finding wood with a matching grain, the wood was lacking the joists. There was no addition, so the duo had to figure out where the joists lay for 24-inch centers (rather than today's 16 inches), carefully chisel out each damaged board, then slice off the bottom lip of the groove in the ceiling joist so it would drop snugly into place over the adjacent joist. Then they face-nailed each end of the patch board into the joist.

"It's really frustrating work because you never want to end up with two top ends sitting next to each other on the same joint or doesn't look good," says Frank.

"Sometimes we had to take out two feet of perfectly good flooring to fix a few inches of damage and make it look right." Patching 280 square feet took the men two weeks and cost \$2,000.

The interior walls, laid with 25-inch-wide tongue-and-groove and 58-inch dry-lap pine and covered with chamois and wallpaper, had suffered major damage. "There were some places where the masonry had dove-tailed some sections and the wood would come out or burst," recalls Frank. Originally, he had planned to strip

rooms. Frank patched 35-inch piers sticking throughout the house. "You don't really see the walls hanging out," he says. He also rebuilt the structure to incorporate several heated glass ceiling panels the mother bought, to save shipping and destruction on the interior walls exposed the joint boards and to fix them.



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the boards, patch the bad sections, and sand the surface. But after months of heavy labor on the house, he decided to remove the most problematic areas and simply put up dry wall. "We didn't bother with the walls too much—despite the termite damage—because those thick boards running perpendicular to the framing provide so much support," he says. To further guard the exterior, they sanded it with 50-inch plywood and finger-jointed redwood siding.

Though the house is now only 2,300 square feet, including the courtyard, Frank says the space feels much open and therefore much larger. He even created a sleeping loft with a bathroom in the walls when time again. And the gallery kitchen, once located where the courtyard is, has been moved to the front of the house, set off by two casual columns.

The bold pair finds space making the decrepit building a beautiful home was welcome as well as educating. But in a fraction of that time he had learned how satisfying renovation work was for him, and he decided it was his thing. In 1995, he opened Costa Antiques, a restoration and preservation firm. The name is a variation of the Spanish word antique, meaning "old things." "I want to build houses for people who want to live in them," he says, "as opposed to those who want recognition for them." Though he is an avid believer in



One of the many apartment buildings located on the Greenwich Avenue side of a new parking lot off from the house by two massive pine columns (10/07)

maintaining the "design integrity" of old architecture, Frank is not afraid to make a new adjustment for convenience's sake. That philosophy has become the hallmark of Costa Antiques as the firm continues to restore the city's history. "Old houses are not meant to protect, they were built for people to live and live in," he says. "You would be foolish to throw out the design lessons that they teach you, but there are modern demands that have to be addressed too." ■

## SECRET GARDEN



To create a private, sheltered courtyard behind his Neoclassical house, Frank Bellizzi and his team peeled off the rest of a flaking second-story addition, eliminated the pine wood floors of both levels, and planted out the first- and second-floor joists. Only the original first-floor sills and those walls—which were so vulnerable to a strong wind as a house of cards—remained.

Reusing the existing walls exposed framing by restoring the studs with pressure-treated lumber, they reinforced door and window openings with new 2x10s to provide adequate support and built a wall to support the one that had been demolished. They replaced much of the old-growth spruce siding—which was too rotted, tilted, and covered with lead paint to merit retaining—with new redwood, lining the interior walls with the same material. Then they installed a pressure-treated pine pergola to ring the inside perimeter of the courtyard. A vitreous terracotta around the porch, providing natural shade.

Between a concrete track, terrazzo's 21 between the houses, they ran a chute through a decorative window to place a side house for salvaged brick pavers, which they had left a bed of marbles. Once the plantings arrived, only one elaborate masonry hour to bring in the 10-foot palm that grows one corner of the space. The lawn was turned to four doors and rebuilt a 12-foot section of wall, they left a week of work but once created a gleaming, rustic conservatory.

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## TALKING SHOP

Clear the Way

"F

or a quick close at hand, there's nothing like safety being dangling from your toes," says Tim O'Brien, plumbing and heating consultant Richard Burkway, stuffing can encounter with a clogged kitchen drain early in his career. Rather than empty the gassy overflowing sink, he went to the attic, opened a pipe, and worked a snake that up from below. "I thought I was done, until the entire contents of the sink came raining down, hitting me square in the forehead—a real 'I'm stronger' move," he laughs.

Today, Burkway cops to start with a plunger and gently escalate the method as needed. "Old home plumbing can be delicate," he explains. "You don't want to come in with your blower—blowing water down the drain or running the clog. You could burst a pipe or blow apart a coupling."

The next attack should come from a hand snake—a coiled metal cable or flat steel wire that winds down the drain and breaks up the clog with gentle twists and raps. Burkway advances a slow, deliberate approach. "Don't use too much force," he warns. "Most people advance several feet of wire before turning it. Then it either hooks—or flips out, scratching the fixture or splashing muddy water all over you." Feed the snake in one foot at a time, he says, then turn it, feeling the way. "It's like fishing," he explains. "You work up gradually, precisely, and where you get to the clog you can feel it. It's a subtle." When you hit the block, work it gently. While this can take care of "less than half of plungers," Burkway says, "you can't force it in a clogged line"—it's automatic means to both plunger and pipe.

### UP IN MACHINES

While every risk in the house exists, standing water, the also easy fix in a main-drain pipe. A succession of leaks (at sink, tub, toilet, 100 feet of 1/2-inch cable, and a 300-foot motor allow this PipeMaster mounted in place. It has 16-foot pipes at three-inch or seven-inch. A first safety guard against injury from the hot cable.

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## TALKING SHOP

### POWER SNAKE

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### HAND SNAKE

For the occasional clog, the inexpensive manual snake provides the most return on the investment. Made from stainless steel, the Quikforce Hand Snake (model) can reach up to 10 feet using its retractable system. It's 1/2-inch long for easily maneuvered into holes that can also attach to a power drill.

### MAINTENANCE PLAN

"Periodically cleaning your pipes is one way to prevent clogs," says Richard Rutherford. If his advice begins to stick, Richard offers a cleaner that contains enzyme-producing bacteria, which digest the grease that can clog a kitchen sink line or the soap scum that builds up in a bathroom drain. These products are sold here, online, says Richard, yet they work well at keeping pipes clear. It cost a couple of dimes a pop.

### TOILET TOOLS

A plunger (img) should be the first resort against any pipe, especially in an easily installed, portable toilet. A bell-shaped rubber cup is pushed against the floor, creating both suction and pressure. Or use a long-handled toilet auger like the Home Depot's (img) Model Pro-Tools, model (img)—with a protective rubber sleeve—to break obstructions apart.

### DRAIN CATCHERS

"Insert a plug-in mesh waste before it goes down the drain," says Richard. Drain-catch mesh (img) fits snugly into tub and shower drains, while a kitchen sink basket keeps food from jamming pipes.

"You don't want to go in with guns blazing—old house plumbing can be delicate."

—RICHARD RUTHERFORD



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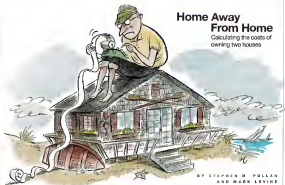
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## Home Away From Home

Calculating the costs of owning two houses

BY STEPHEN M. POLLAN  
AND MARK LEVINE



# A

fter staying on Martha's Vineyard for eight seasons, Joan and Mitchell Peim (not their real names) decided to buy a vacation house there. A \$308,000 investment would serve as their down payment, and moving out the four-bedroom home for part of the season would help defray the mortgage and maintenance costs. "It even had dreams of coming out ahead" on the deal, says Mitchell. But when they met with their accountant, the Peims discovered that making the house pay for itself wouldn't be easy. In order to avoid paying full-season taxes on the rent they collected, for example, they'd have to severely limit their own use of the house. "We'd spend up spending less time on the Vineyard than if we were still renting," he says.

Millions of Americans dream about buying a second home in a coastal paradise, a luxurious ski area, or a peaceful country town. A secondary residence can offer a weekend getaway, a place for extended families to gather for vacations, or one in which to retire in the future. It can also be a good investment, since well-located real estate typically appreciates in value. And then there's the rarely mentioned thought that owning one's own home will let you pay for itself, at least partially. But buying a vacation home involves some tricky financial planning. Everything from mortgages to homeowners' insurance will cost more than it does for a primary residence. And though you can write off mortgage interest and property taxes, racking out the property's complete tax impact isn't as simple. So here

ILLUSTRATION BY GARY HOYLAND



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## FINANCES

are some important considerations to bear  
in mind as you scan the real estate scene.

**BORROWING MORE EXPENSIVE**  
Banks talk a good game about the typical  
second-home buyer being the kind of  
customer they're after: someone who's  
affluent and willing to use credit. But when  
push comes to shove, it's not that—talk.  
The loan terms they offer aren't as good as  
those for primary residences.

"Second home loans typically face more  
rigid rates, at least  
one-quarter to one-  
half a percentage point  
higher than if they  
were borrowing to  
buy a primary home,"  
says Julie Tritel, a  
mortgage broker with  
BN Financial Services,  
in New York City. "They'll also face  
the demand for more  
points up front." Tritel  
says that's because  
second home

loans are by definition stretched thinner  
financially, and the accepted lending wisdom  
is that a borrower would rather fall behind  
or default on the mortgage for a vacation or  
weekend home than for a primary residence.

"Second home loans shouldn't count on  
using potential rental income as a way to  
cover lenders," warns Tritel. "Some banks  
won't make loans on income property at all."  
Those lenders who will consider them—speci-  
ally smaller banks located in vacation  
areas—will want cash-flow statements and  
exclusive appraisals, and even then won't  
take more than 75 percent of the initial  
income into account, Tritel says. Of course,  
if your original intent when you obtain the  
loan is to use the home as a residence but you  
subsequently change your mind and decide  
to use it as an income property, no bank will  
cry foul as long as the payments are made.

Despite the drawbacks, Tritel believes it  
will make sense to look for a separate  
mortgage rather than using a second mortgage on  
your primary residence to finance a vacation  
home. "Even though the home equity loan  
might be simpler to obtain," she says, the  
rate will probably be higher than on a sep-  
arate vacation home mortgage. In addition,

you can deduct up to \$1.1 million in interest  
on two mortgages combined, but only up to  
\$100,000 on home equity loan interest.

### INSURANCE PITFALLS

Insurance on a second home typically costs  
15 to 20 percent more than on a primary  
home, simply because you're not there as  
often to keep an eye on things, says Andrew  
Schwartz, an insurance consultant with  
AMS Risk Management in Rockville City,  
New York. And if you're going to be  
renting the home, con-  
sider could cost more  
still (at least another  
20 percent), since most  
renters consider a  
tenant's stay to be  
more likely to result in  
property damage than  
an owner's, he says.

You can keep these surcharges to a mini-  
mum by installing a  
monitored alarm,  
living in a good  
community, showing

there's a natural winter source near a road  
property (so the fire department can close  
a block), or getting a package policy with  
the insurer who covers your primary home  
and cars.

Add some umbrella liability coverage  
to your homeowner's coverage as well. Not  
only does owning a second home mean you  
have more assets to protect, but if you plan  
on renting, your exposure to lawsuits for  
accidents or injuries that occur on the prop-  
erty increases dramatically, says Schwartz.

### THE TAX PUZZLE

"The way the U.S. treats your second  
home, and the tax options available to you,  
depends on how often you rent it and how  
often you use it yourself," explains Richard  
Koenigsberg, CPA, of Smith, Koenigsberg &  
Parker, in New York City. The U.S. tax  
characterizes your second home in one of  
three ways: rental property, mixed-use prop-  
erty, or personal residence.

**RENTAL PROPERTY:** This category offers  
the best tax advantages, but limits how  
much you can use the home. For your sec-  
ond home to be considered a rental property,  
you must rent it (for cash or rent) for at least



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15 days a year while sitting in prison for less than 13 days, or 15 percent of the number of days it's rented, whichever is greater. For example, the Peaches rented down out from the Merlot Vineyard for six months (180 days), they paid their family and friends rent for a few less than 19 days for it to be considered a rental property.

"Why bother trying to qualify for rental status?" Because you can then deduct all the costs associated with operating, repairing, and maintaining the property from its rental income," explains Koenigsberg. So in addition to deducting the mortgage interest and real estate taxes, you can claim utilities, lawn care, repairs, insurance, cable television, garbage removal, and all your other expenses. "You could even claim the cost of traveling to and from the property," Koenigsberg notes. The purchase price of appliances and the house itself will be depreciated, or gradually written off, over 7 years and 27½ years respectively.

Still, the total amount of rental expenses you can write off every year is limited by the I.R.S. If you rent the personal use requirements, and your adjusted gross income (AGI), for joint or single filers, is less than \$100,000, you can deduct up to \$25,000 a year in excess of rental income. Have an AGI of between \$100,000 and \$150,000, and that \$25,000 "rental allowance" is reduced, and if your AGI tops \$150,000, your deductible expenses can not exceed your rental income. "Since most second home owners have high taxable incomes, owning a rental property becomes, at best, a wash. The expenses will eat the income," says Koenigsberg. "You end up with a lovely place to stay for a short time in exchange for lots of book-keeping, the expense of being a rental broker, and a higher tax preparation bill from so many deductions."

**MIXED USE:** "If you use the property more than 15 days or 10 percent of the time it's owned, your house falls into the mixed-use category and the tax benefits drop considerably," explains New York City-based real estate attorney Marshall Stein. From a tax perspective, this makes things complicated.

Defalcation in a mixed-use property are apportioned based on the amount of time the house is rented. "If tenants rented the house for 25 percent of the year, you can

only write off a percentage of each non-associated expense that matches the percentage of time the house was rented," says Stein. If, for instance, you spent \$1,000 a year on lawn care on a property that was rented 25 percent of the year, you can only deduct \$250. Meanwhile, most types of rent and taxes can be written off against the rental income, although you can only claim 25 percent on your Schedule E (rental property tax form), and the rest gets written off on your Schedule A (itemized deductions). "The catch is, you can't deduct any more in total expenses than it takes to offset the total income," Stein adds. (Kamari expenses you rent's while so close can be carried forward to either next year's rental income, if need be.)

**PERSONAL RESIDENCE:** If you rent your second home for less than 15 days a year, or don't rent it at all, it's considered solely a personal residence by the I.R.S. That means you simply deduct the mortgage interest and real estate taxes on your Schedule A. But there's no mortgage deduction if you rent out your vacation home for your primary home for that matter for 14 days or less, the I.R.S. governs the income. Yes, you read that right. "Not only don't you have to pay taxes on that money, but you don't even need to report it," says Koenigsberg. "The IRS can't respond to report the amount or length of my stay either," he adds. (The I.R.S. must ask homeowners themselves to report rental stays—no matter how long.) The amount you earn in those 14 days is irrelevant. Whether you bring in \$200 for renting your house during graduation week at State U or \$20,000 renting your home in Aspen during the Winter season's winter, it's all tax-free if the term is less than 15 days.

The message is clear: If you want a second home to be a tax-free money-maker, buy in a location where you can make a lot of money renting for a very short period of time. In other words, second home investments shouldn't be analyzed on the basis of money alone. Despite the added tax when unexpected costs involved, vacation-home owners tend to find that the benefits outweigh the burdens. For the Peaches, buying and renting out their Vineyard house has meant a lot of headaches, fewer admissions. "Still, we'd do it all over again. It has brought a lot of joy to our lives." ■

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2. "If you try to apply water over oil stains left by cars, it will bubble up and permeate right like old paint," says Capone. Commercial degreasers can remove most of the oil, though Capone warns that some on-site petroleum products—the very substance he's trying to keep off the driveway—and asphalt is careful to check the label and avoid areas that contain "petroleum distillates." During to work on one recent stain, Oliver jawn degreaser until and lets it sit for a few minutes.



3. Oliver finally brushes the degreaser into the spot, which loosens the surface grease. Then he rinses off the area with a garden hose to remove the chemicals, sending the surrounding driveway with a lot of water to disperse the effects of the runoff. Though a stain will remain at the all spot, it may be hidden—Capone explains that he repairs the degreasing only if water beads up on the area, indicating that oil is still present.

# THE BEST THINGS IN LIFE ARE BASIC



**SURGEON GENERAL'S WARNING: Smoking By Pregnant Women May Result in Fetal Injury, Premature Birth, And Low Birth Weight.**





More than ever, there was a key to how their homes' content look. In response, furniture manufacturers are designing pieces that transcend gender. Chaise and ottomans, many of the furnishings introduced at the Chesler's International Home Furnishings Market in High Point, North Carolina, were deliberately styled and styled to appeal to men as much as women.

The new pieces are a case study in comfort and also prove that design doesn't have to appear chaste. Slipped to their essentials, these designs derive their good looks from the inherent beauty of their materials. Rich, dark woods such as mahogany, poplar and maple, often taking a backseat in some years to pale maple) and dressed ottomans, ottomans and chaises that lend a subtle, worn-in look; some are ribbed with black lines for a more rugged look. Straps, cast, and wicker are woven to make the most of their natural textures, with some leather pieces wrapped in ruff-like material that braided so thickly as rope. Leather is everywhere, especially on ottomans, but it runs up, too, on ottomans, desks, and even on the headboards of huge beds.

Big, bold, and tough boys, these are authoritative pieces that can single-handedly make a room—day or night alone, but they also play beautifully with others. Because of their simple, sporty designs, these pieces can, as well as furniture look well in both traditional and contemporary rooms. Robust pieces to live with, this new generation of furniture displays the ultimate power of good design: staying power.

BY LIZ BEYMOUR PHOTOGRAPHS BY TIMOTHY BELL

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## bold

Black is back, as are pumped-up square shapes. New finishes inject a breeding element of surprise into traditional designs, such as the turned-post-and-festooned below, while revealing the grain and texture of natural materials like leather, wood, or silk. The edge, a statement from that is shaping up its everything from armchairs to ottomans to table bases, lends prominence to the sleekest pieces.

2001 *FurnitureTrends* would undoubtedly have enjoyed making into the 81-by-46-inch, three-seater Luxembourg sofa in the collection Thonet's named after his son (see p. 120). Engraved designs are the hallmark of the American Sport carver's bed in the Wisconsin Collection by Lane. **WICKLE** 2000: Designed here for first to first conversation, a pair of long, 40-inch flared chairs from the Harper Modular Group by Joe Raggs for Norwell are also seen along their armless sides to take the place of a bar stool. **RETURN** Standing sturdy upon four thick, carved legs, the 48-inch square dining table from the Norwell Home Collection for Lexington can hold a leaf and extend to 75 inches.



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Mercury

## rough

Texture rules. Cozy materials such as linen and raffia add visual interest and evoke nature indoors. Fluffy shaggy woods reveal their grain and absorb the light, while reeds and grasses are woven in high relief, calling attention to the profiles of pieces such as the wing chair at right. Tufted and upholstered, these surfaces invite touch and impart a casual sophistication to any room.

**TOP TO BOTTOM:** A 44-inch round pedestal dining table from *Abstract Home* for Lexington is made of a top and base with woven reeds in a tent-like shell finish. Timbly woven cotton fabric used as a coverlet on the *Leaves* wing chair from *River International's Royal Suite Collection*. *Whiting Road's* 18-inch wide and 18-inch high wooden stools are hand-carved and finished with a natural oil. The hand-carved and finished of the *Phantom* chair from *Dezart's Tuscan Collection* are covered with a top and a shaggy reed fabric with grass.



Abstract Home  
"Leaves" Chair  
"Tuscan" Chair  
"Phantom" Chair



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**big**

High, wide, and handsome the turned crop of gravity-proportioned furniture gives you more of what you're looking for. Substantial pieces such as the two-story dresser and Paul Burges-style bed pictured here provide a broad profile put work even in a small, rustic room. Handmade pine above the main, bedside bench in the ceiling, built-in shelves to maximize a corner, and upholstered seating in deep and expansive. Here, bigger is better, not better.

**THE INDUSTRIAL** Tipped by its own serving tray, the 46-by-13-inch leather-clad suitcase designed by Barbara Barry for Roberthson is a coffee table, storage is provided beneath its slatted raft. *Aluminum jacket. At Home added steel accents to the barely four-pawer chair, another signature touch is the raffish, herringbone finishing on the oak side table from, Daisy Webb's \$2,495-62-inch two-tier server is made of New England white pine, with a painted finish that has been "distressed" to look timeworn.*

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## HOMEOWNER'S STEP-BY-STEP PROJECT SERIES HANDBOOK

### HANGING KITCHEN CABINETS



When it comes to the proper installation of kitchen cabinets, there's a lot to think about. You need to be sure the cabinets are level, and the drawers will fit and close properly. It's a lot to think about.

BY TIM GARDNER

**W**hen The Old Mouse contractor Tim Sliva started his carpentry career over 35 years ago, he often built the kitchen cabinets he installed for his customers. "Back then, it was still cost-effective for small shops to build them," he recalls. "Today, manufacturers assemble them faster and more economically than we can."

Cabinetmakers also offer an overwhelming variety of styles, features, and price points, but with the help of a knowledgeable kitchen designer, finding your order can be the easiest part of a major remodel. The heavy lifting begins, literally and figuratively, when your cabinets arrive.

As Tom explains it, the goal is to take this collection of

boxes and bring them together to make a beautiful piece of built-in furniture. The basic installation sequence is straightforward: You want to get everything straight, plumb, and level. But more often than not, the room itself lacks these attributes. "When walls aren't flat, floors aren't level, and corners aren't square, that's when it gets interesting," Tom says with a smile.

Cabinets bring the right way around such obstacles and become the solid centerpiece of a kitchen. "When you're done, you want the cabinets to look as though they were custom-made to fit the space," he says. And all that should show of your hard work are tight joints, flush hinges, and perfectly aligned doors.

PHOTOGRAPHS BY DAVID CARMACK



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## HOMEOWNER'S HANDBOOK

**Materials** Kitchen cabinets may look pretty much alike, but according to Tom Silva, they don't all hold up equally well. "That all depends on the bones—how a cabinet is constructed and what it's made of," he says.

**CARCASS:** "I always look for a good, heavy box, one with a thick, solid back or rail where I can screw it securely to the wall." Tom favors plywood (over particleboard or MDF), dadoed or mortised joints, and metal corner braces (1).

**FINISHES:** Catalyzed lacquers or conversion varnishes are the toughest, either can be applied over clear or painted wood.

**FASTENERS:** Screws are best, but unless you pay for custom-made units, most cabinets are held together with staples or brads.

**DRAWERS:** Doweled joints (2) stand up to constant abuse better than simple box or buttled joints. Fully extending drawer slides (3) cost more but allow complete access.

**HINGES:** The exposed knuckles on leaf hinges beat a traditional look, but they are hard to adjust. Cup hinges (4), also known as European or concealed hinges, are more easily adjusted to keep doors hanging true.



"Never assume that wall surfaces are flat, floors are level, or corners are square."

—Tom Silva

## Tools



1. Cordless drill for securing cabinets to the wall and each other
2. Bit set for boring holes and driving screws
3. Hand saw for cutting into joints
4. Angle finder (optional) for measuring angle between adjacent walls
5. 4-in-1 screwdriver for removing and installing screws
6. Hammer for calling tape in place
7. Tape measure for cutting studs flush
8. Chalk line for snapping layout lines
9. Tape measure for general measuring
10. Telling ruler for measuring between surfaces that face each other
11. Bubble level for determining level and plumb
12. Block plane for back-bushing face frames and fine-tuning surfaces
13. Compass for setting cabinets to the wall and each other
14. Bar clamps for holding cabinets together
15. Utility knife for trimming shims
16. 5-inch chisel for shearing wood to face fit
17. Framing square for determining squareness of corners
18. Wood shims for making cabinets plumb and level
19. 2x-inch deck screws with washers or washer heads (used for anchoring cabinets to the studs) (drill screws can snap)

### NOT SHOWN

6-foot step ladder for installing upper cabinets  
Steel jointer (optional) for joining and aligning face frames  
Wide screw for wall holes for plumbing lines  
Strap bridges for checking that face frames are flush



### STEP 1: MARK THE LAYOUT LINES

- Using a level, mark a level reference line on the wall about 18 inches off the floor (just). Snap a chalk line at these marks, and measure from this line down to the floor in several places. Mark the line where the measurement is shortest; this is the high point of the floor.
- Directly beneath the mark for the high point, mark the height of your base cabinets (over), usually 36 inches above the floor. From that mark, extend a level layout line along the wall. The top of the base cabinets will be flush with this line.
- Measure 17 to 18 inches up from the base cabinet layout line, and snap a level chalk line for the bottom edge of the upper cabinets. Find the studs and mark their locations on both layout lines.
- Mark out locations of all appliances.

**TIP:** If you have a tall cabinet for a pantry or built-in oven, its height determines that of the other upper cabinets.



### STEP 2: JOIN THE UPPER CABINETS

- Remove doors, drawers, and movable shelves to make the cabinets lighter and easier to position. Label everything with masking tape so each piece can be put back without mix-ups.
- Set a straight 1/4-inch straightedge and just beneath the layout line for the upper cabinets. Drive 2-inch drywall screws through it and into every other stud. Attach these screws along the length of the line.
- With the cabinets on the floor, align the face frame of the upper corner cabinet so it's flush with the face of the neighboring cabinet. Clamp them together. Check for flush with a straightedge.
- Drill caution-rated pilot holes (see Glossary, p. 100) through the edge of the face frame, top and bottom. Drive 2-inch screws into these holes to hold the cabinets tightly together (over).

**TIP:** "You don't want any gaps showing where face frames join," Tom says. "That's poor workmanship."

### STEP 3: INSTALL REMAINING BASE CABINETS

- Working out from the installed corner cabinet, slide the adjacent cabinets out from the wall (at the stud location) and up from the floor so that the face frames are plumb and the tops are level and even with the layout line.
- Align each cabinet so its face is flush with its directly-adjacent neighbor. Clamp them together, counter-sink through the edge of the base knives, and tighten them together with 2-inch screws, as in STEP 2.
- At the shims, drive the deck screws (with washers) through the cabinet back and into studs (over), as in STEP 4.
- Clean any gap between the wall and the end cabinet by setting its side on the back edge of its side panel. Or cover the gap with trim.
- Using a utility knife, score and snap off any shims that protrude beyond the edges of the cabinets.
- Remove all the upper cabinet support blocks and fill the screw holes with spackles.
- Place the doors and shelves in their original cabinets.





#### STEP 3: HANG THE UPPER CABINETS

- With one or two helpers, lift the upper cabinet assembly into the corner and rest it on the island (opposite).
- As a helper steadies the assembly, check the cabinet face with a level to see if it's plumb. If it is, drive four 20-inch-disk screws (with washers) through the back of the cabinet, top and bottom, and into the studs. If it's not, slip shims between the cabinet back and the wall at the stud locations. (To show out the bottom, remove the door.) When the cabinet is plumb, come through the shims to the studs.
- As the remaining cabinets onto the stud, align their faces flush with those already installed, and clamp and corner the edges together (see STEP 2). Split shims are necessary; then fasten them to the studs through the shims with the 20-inch disk screws and washers.
- Close any gap between the wall and the end cabinet by installing its stile or back edge (see Glossary), or by covering the gap with trim.

#### STEP 6: REPLACE DOORS, INSTALL TOEKNOK

- Reinstall the cabinet doors (next). For opening doors, which cover the cabinet frame, adjust the hinges so that the doors hang straight. For an inset door, adjust the hinges so door is flush with the face frame and so there is an even reveal (gap) around its perimeter.
- Using 1-inch brads, fasten the toe-kick trim to the base cabinets. Fit the hingeless doors first, then cut and install the shorter pieces. Close any gaps between the floor and trim by sanding, or cover them by brad-nailing a shoe molding to the floor. Reverse the wall panels with a rail set and cover them with wood putty or color-matched wood stain.
- If there's crown molding to fit on the upper cabinets, enter the joints at outside corners, cap the joints at inside corners (see "Growing Truth," September/October 1996). Align the molding's bottom edge with a level layout line marked along the tops of the doors. Fasten the molding to the cabinet with 1-to 2-inch finish nails. Glue the molding's end joints. Reverse the wall panels with a rail set and cover them with wood putty or color-matched wood stain.



#### STEP 4: INSTALL THE CORNER BASE CABINET

- Detach the corner cabinet into position. Slide it up from the floor until its back edge meets the layout line.
- If there are plumbing lines, push the shimmied cabinet against them and mark their locations on its back panel. Turn the cabinet around and drill holes through the back with an appropriate-size hole saw.
- Using a level, check the face of the cabinet for plumb. If it's not plumb, insert shims between the floor and the bottom of the cabinet, or between the wall and the back of the cabinet, at the stud locations.
- Check that the top of the cabinet is level, and add shims underneath as necessary (opposite).
- With the cabinet sealed against its shims, drive 20-inch-disk screws (with washers) through the cabinet back and into the studs. At the shims locations, countersink and fasten cabinet to the floor with cork screws (with flat washers).



#### FIT TO BE TIGHT

Cabinets are made straight and square, but the walls and floors they rest against are rarely so. That's where shims come in handy. When tugged into place by just the right amount, these wedge-shaped pieces of wood ease plumb and level a cabinet, dissolve a room's irregularities.

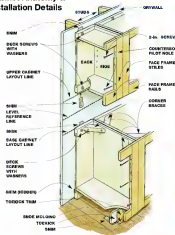
But when walls meet at an angle greater than 90 degrees, shims alone may not be the answer; they can cause the cabinets to project out too far, leaving an unsightly gap at the ends. "Corner cabinets are usually the first area to be installed," Tom Silva explains, "so if they don't fit right, the rest of the cabinets probably won't, either." His solution is to remove some drywall on the backs of the corner cabinets (both upper and base) until closer to the studs.

Finally, if the walls aren't straight where a bank of cabinets sits, the best way to hide the gap, in Tom's view, is to make a tight fit. After the cabinet is plumbed and leveled, he cuts the stile or the back edge of its side panel so that it follows exactly the irregular contour of the wall (see Homeowner's Handbook, March 2001). Before working, Tom always back-braces the edge with a black plastic jointer. Back-bracing narrows the edge on the inside side for fine-tuned fender and more easily.



**Glossary:** **BACK LEVEL** 1/2 in. (12 in.) long placed vertically against the edge of a cabinet in a corner joint. The back always stays away from (and does not touch) the exposed face of the side back panel. **COUNTERTOPI** A bracketed assembly with a glass hole and slots a screw for the panel used to be covered with a glass or wood plate. **SCOTCH** A red plastic glue that sticks to a cabinet's back panel and follows the contour of an adjoining surface.

#### Cabinet Anatomy & Installation Details



#### PLANNING AHEAD

- Lay a wood floor before hanging cabinets. "It goes down a lot faster in an empty room," says Tom Silva. Protect it with thick painter's pads during installation. Sheet flooring is more easily damaged, so lay it after the cabinets are in.
- Using a level level, in drawing corners, and in straight back, check the walls and corners to see if they are plumb, square and straight. Note any dips, bulges, or angles that will require extra-filing, shimming, or alteration of the wall.
- Install electrical boxes for the range, dishwasher, garbage disposal, refrigerator and vent hood. Locate receptacles above your countertop backsplash every 4 feet, and anywhere you plan to use a portable appliance. Allow rough in cabinet lights and their wall-mounted switches.
- Run in supply and drain lines. Make sure top is not glued to close gaps.

NEAT INSTALLATION BY  
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# LETTER FROM THIS OLD HOUSE

## Willing Player

V

ewer must wonder what the experience of owning a *This Old House* project is like. Most T.O.H. fans fantasize about having the guys come over and work their renovation magic. But I was an on-again off-again viewer when I stood as steeple in the *Palen Ranch Post* a house the show's search for a West Palen Ranch project. Despite the fact that I crowded them and there to submit my little hacienda for consideration, I didn't have much guess of scheming during about my head. Rather, I had some trepidation. I was worried that I'd be wrong-headed into decisions, which would have been particularly bothersome since I'm an interior designer with close clients of my own. And the thought of being in front of the camera isn't that I like it, either.

What I did like was the possibility of finding my renovation at just these moments—the ones it takes to have a connection—and trusting some of the best craftsmen in town.

I assumed—as many viewers do, I suspect—that the show paid for all the work, and consequently called the shots. But the first thing I learned when I sat with the producers was that this would remain my project: my decisions, my taste, and, most important, my checkbook. Though the show would suggest a path, I was perfectly welcome to its ideas that didn't suit me. And I was still going to have to pay for the work, though many of the materials would be discounted or donated, allowing me financial room to expand the scope of the renovation.

T.O.H. has brought in ideas and experts and producers that I otherwise wouldn't have included, and, in fact, I'm spending more on the project than I planned to. But I've decided it's well worth doing so. For example, I found myself seriously musing about having a skylight in my kitchen, and before I knew it, I had the newest, most advanced skylight on the market. The roofers showed up to do the kitchen addition and pointed out to me that the gopher roof—removed by the previous owner—was surprisingly flatbed, and looking. Within days, I had an antiseptic, historically accurate terra-cotta tile roof over the kitchen door, which not only looks better, but also showcases excellent craftsmanship.

There to assist, I sometimes wonder if the other shoe is going to drop. But I've not yet been forced to make a move that doesn't tug at me. I know what I want and what's going to work for me, and the show clearly respects that—as I do all the things they bring to the table. So I think I'll just try to enjoy my brief renovation, knowing that I'll be left with a smarter, better-built house, a lot of sweet new memories—and a little less stage fright. ■

Winter project homeowner Rob Thompson is reliving the experience of working with *This Old House*.



PHOTOGRAPH BY DAVID ALBANESE

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tv project/west palm

# Cabinet Meeting

Rob's kitchen takes form

BY JEFFERSON HOLLE

While master carpenter Norm Adams selected an electric line that will feed under-cabinet lighting, general contractor Tom Allen directs the crew on the basic for MDF cabinets.

**S**itting on the floor in a kitchen that's still in its early stages, Rob Thompson, owner of the Old House project, is looking at the plans, watching the electrician drill a hole through the wall. He's looking at the plans, watching the electrician drill a hole through the wall. He's looking at the plans, watching the electrician drill a hole through the wall. He's looking at the plans, watching the electrician drill a hole through the wall.

Anything that correlated with that main idea.

PHOTOGRAPHS BY SPAN SMITH

Check out [www.robthompson.org](http://www.robthompson.org) for a story about all of the design choices made by homeowner and professional interior designer Rob Thompson.

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was tossed in the Dumpster. First to go: the peninsula topped by ceramic tiles with pastel flowers. It jettied out into the pergola, and "all it did was stop your line of sight," Rob says. Although he is ruled to reuse the old cabinets in the new house, these paralleled boxes broke apart during removal. Nice to be rescued were the once-freshly, now stained Mexican floor tiles, which had to chipped out of a solid bed of mortar by hand.

In choosing what to put back in the 18-by-100-foot room, Rob stuck to a single design: simple reuse simplicity. The others, for instance, are a single forward design in the Shaker style, with flat-panel doors. "It looked like the simplest doors and chosen from the things they had in the cabinet shop. No fancy woods. No heavy signs or ornate moldings. Everything painted off-white." To Rob, when economy says function, not form. The upper will be glazed with a single pane of glass, with just the shelves behind it to suggest horizontal motion. "I want my client to be the only real decorator in the whole room," he says.

What ring to have instead at first to be a disadvantage—no windows—afforded room for apple sauce. "Even if we managed to put a window in, we'd have to get permission from the historic-district commission," Rob says. "And then it would have looked right into my neighbor's house." Instead, the outside wall will be devoted to the six-burner cooking and its range hood. To bring in natural



On the wall where the old kitchen held a gas stove and a dining nook for 11,000, the plan calls for a gas cooktop, microwave, and convection oven. That means new electric and gas lines, so contractor Andy Cagill removes the old wiring.



1. After jacking up Marvin Kahler Gallery, now the first cabinet on a replacement for demolishing the others, an 80-inch cabinet is built in place. 2. First cabinet is attached to the previous one below it, fastened to the studs in the wall. James helps out in pushing a each rail on top of the cabinet, and across the two units together. 3. To build the upper cabinets, he built the left then cut the lower units and set them on their heels. 4. To give the small gap between the cabinets and the ceiling, he added a molding 6 1/2" off. He painted the cabinets "milk white."





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So what does your heart  
have to say?  
They say you like me better.  
You like me better.  
So what does your heart  
have to say?  
They say you like me better.  
You like me better.



## by project/west palm

lights, Rob will rely on a 21-by-38-inch skylight, which opens up to capture prevailing winds during hot days. "It's a great way to get fresh hot-moisture air," he says.

The appliances—cooking and heating, refrigerator, dishwasher, wall oven, and built-in warmer—all have stainless steel fronts. To color these, Robt. will install heated chrome inlays and pulls on the cabinets. The Tropical Green granite countertops and backsplash being the only color to the room. "Granite's durable and easy to keep clean. I also wanted it to be green, to pick up on all the plantings around the pool."

As a hotel trends, Ritz was thinking about layers down an Orsonal runner over the new floor, which is made of the same tongue-and-groove oak strips as the dining room floor. "It would make everyone keep on walking right through to the porch, where I plan to spend most of my time."

Then he pauses to reconsider "You know, the kitchen is going to turn out so well, maybe it's not a bad thing if people want to linger in here for awhile." ■

### Rob's Kitchen Choices

When owner Phil Thompson saw more than just a beautiful kitchen, he wrote a plan that makes cooking out a breeze as well. The eating, gray-green Italian granite countertop (2), for instance, looks a lot of color and flourish to the eyes. And it's also pretty indestructible. "I went with stainless steel appliances mainly for the look," fish-eaters, "but also because it's more forgiving than other surfaces." The undersupport, single-lined sink (3) is dust-resistant and won't fade, stain, or rust. And under the chrome plating on the 8-inch-high glass-enclosed sink flange (4) is durable solid brass.

[illegible]

and a fully written draft is expected by 2004.

tv project/west palm

Check out  
www.thefix.com.org  
for details on the show, which  
will be filmed from 10 a.m. to 1 p.m.  
and 2 p.m. to 5 p.m. on Wednesdays.

# weathering THE STORM

If it's not nailed or screwed or cemented down, Florida's hurricanes will blow it away

BY JEFFERSON HULL

When facing the threat of a hurricane, people in Florida (and other parts of the Southeast) are often told to "batten down the hatches." But what does that mean? It means to make sure that everything that could be blown away is secured. In the case of a house, that means making sure that everything that could be blown away is secured.

Lisa Flanagan is a busy mom. An adult building supervisor for West Palm Beach, Florida, she stops by as many as 25 construction sites a day and makes sure everything is going smoothly with the codes. Recently, one of those visits took her to The Old House's writer project at the city's Flamingo Park Historic District. Looking over the well-addressed construction jobs, Kern and Edgell had just finished framing. Flanagan immediately spotted a problem. Kern explains, "I'd been installing a metal hurricane strap when my cell phone rang, and I forgot to go back and put in the last few nails. That supervisor was like a dog on a stick." Then he adds, "Those guys are good."

They have to be. Florida is a hurricane country, having been hit at least nine times in the past 25 years. The last one to hit through

West Palm was Irene, in 1998, which peaked over the wind of 75 mph and dumped 14 inches of rain. But that blow was relatively mild compared with Andrew, which ripped through the state in 1992, about 340 miles south of West Palm. Its 140-mph winds caused \$26.1 billion of damage, making it as the most costly disaster ever in the U.S. To make sure houses can survive the wrenching gusts of these tropical cyclones, the state and Palm Beach county require special wind-related building codes and require a series of meticulous on-site inspections. Home or his coworkers will look in on the house some 20 times—checking that everything, from the windows to the front tile roof, is properly anchored.

The new address that Kern and Edgell are building for home-

PHOTOGRAPH BY BRIAN SMITH

GRUNT.  
YANK.  
DIG.  
CRANK.  
GRUNT.  
SWEAT.  
STOMP.  
CRANK.  
GO TO THE HOME DEPOT.  
PULL.  
TRIM.  
DONE.



John Deere, Scythe, Edgell, and the other guys are good.

Working hard in the tropics of the sun.



Fixes in Florida: The Home Depot.

owner Rob Thompson is only 100 square feet, but according to code, size doesn't matter. Every structure must pass muster. "We had a client who built a tree house for his kids in the back yard," says Roger Jensen, the architect for the T.O.H. project. "The building inspector saw it, and we had to go back in, do an engineering study, and bring it up to code." This isn't an out-of-control bureaucracy running amok, Jensen explains. "It's not just your structure they worry about—it's what happens when it comes apart in the wind and blows into your neighborhood."

The key to whether a building stands or falls when the wind blows is the code's definition of how it's held together. Nails are fine when the steady pull of gravity is the main force acting on the structure, but they really work loose when pummeled by a hurricane. For example, it takes a bling force of about 17 pounds to separate a standard 1x6 rafter from the top plate of a wall. Nail a 1x6 rafter back steel away over that same connection and the required force shoots up to 300 pounds. The code specifies that these straps and other rigid reinforcements link each part of a wind-lashed house to the next, which creates a "continuous load path" from roof to foundation. (See "Bracing for One," May 2006, page 55.) In other words, each rafters and tie the wall's top plate, the plate is tied to each stud, and so on down to the steel sill, which is bolted every 32 inches (and within a foot of each corner) to a solid concrete foundation. "The framing has to match metal so it can't look like tooth with bricks," says Edgell.

After Hatten wrenched Kern out of the unfastened mess, he approved the framing and left the site. But an inspector from his office returned a week later to check the installation of the house's new aluminum-framed, impact-resistant windows. "These can have the strongest framing in the world, but if a large window at a garage door falls and the wind goes in the house, the pressure ripples can literally blow off the roof," says Kern.

But years, homeowners in Florida have covered windows with rigid plywood, metal, or plastic hurricane shutters to fend off the storm debris that flies around like shrapnel. But that's a major hassle, especially for the Sandhills State's many part-time residents. After Hurricane Andrew, the state let the impact-resistant windows grow exponentially, according to Dave Olmstead, of FCI Industries, the north-Florida window manufacturer that supplied Rob's 36 aluminum-framed replacement windows. "The technology is the same as the laminated glass in your car," he says: two layers of 1/4-inch tempered glass with a clear film of polyvinyl

butyral sandwiched in between. The difference is that in the residential games, the plastic film is three times thicker than that used in cars.

Before windows can be sold as impact resistant, they must pass several tests approved by the Miami Code Office of Product Control. In the common test, technicians fire a 3-pound 2x4 at 34 mph at two different spots on the window: once in the center of the glass, once in the corner of the frame. Then the window is put in a wind tunnel and subjected to 3,000 cycles of wind that reach 120-mph gusts. After the test, the glass has a network of cracks, but the test is approved if it holds up the test with no more than a 1/4-inch-wide by 3-inch-long hole. Such windows are about three times as expensive as standard ones, but they have a secondary benefit, says Olmstead. They're a no-no decision. "In Florida, we have a lot of what the police call smash-and-grab." These windows make them impossible.

A window's impact-resistance depends on how well it's attached to the structure. So, after stripping out the old ones, Edgell fills the only single pockets with 2x studs, glued and screwed to the next rig framing. "There can't be any space between the joints and the studs," he explains. "The new windows have to be attached to solid



vinylating. Every single joint in the second framing must be designed to match the first. Edgell's Contractor John Kowalski estimates that the owner used some 15 different types of aluminum cladding for the 32 linear feet of wall that surround the structure's exterior. Kern made a double-thick door that looks like the wall.



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BY MICHAEL CHABON PHOTOGRAPHS BY MICHAEL VERERA

## a fortress of one's own

In search of solitude and inspired by a comic-book superhero's hideaway, novelist Michael Chabon built a private retreat in his backyard

Our house was built by a doctor named Shuler in 1907, on the brown shingle site that gives the streets of Berkeley their rustic and funky grime. He seems to have been a fairly successful and well-known local doctor, with an office downtown in the Wells Fargo building, on Shattuck Avenue. He was an enthusiast of California native plants, and he left us a number of interesting and beautiful old specimens. At some point a rose bush planted by the doctor, or so we imagine, went crazy and threw itself into the willing embrace of its neighbor, a redwood tree. The rose vine grew to insane proportions, and every spring it lit up the top of the tree with vibrant scarlet. The Shuler it just let it grow. Eventually it crashed the front porch.

When I first got to know our house, I felt attracted to the idea of Dr. Shuler, of my own personal Dr. Shuler who sat patients and plants come inside my head. There was an air around his house of mysterious but noble labors being undertaken, far from the paying eyes of man. Here, I said to myself with a Superman shiver of backknowledge, here is where I will build my Fortress of Solitude.

At first I thought that I would build it in the office. This was a very small room, created either from outside the house or by passing under the hall screen, through the coat closet. It was, at one time, a functional medical consulting room, and had been as a sleep clinic, with a small porchlike side in a corner and a built-in cabinet for drugs and instruments. It has wainscoting inside, like the dining cabinet and all the decorative woodwork in our house, of fir turned dark over the years—plain and handsome, if a little close, which was pretty much how I imagined Dr. Shuler himself. And for the first year or so that we lived in the house, I worked in Dr. Shuler's old office. It presented a few structural problems—no obvious place to put either books or bookshelves was the main one—but it was comfortable and had that weird, doctor-vibe that seemed somehow appropriate to a hidden lair.

But it had one major flaw. It was under the stairs, attached to the house, adjacent to the services and buslines of the often noisy, at times hysterical, group of young humans with whom I have for some reason chosen to surround myself while I try to write books.

Then, too, I thought a stake nobody was living over the main staircase. This had been where the doctor sat patients on Saturday mornings, and I wondered if the people who came to see him often were people who had to work during the rest of the week and could not afford to take the train all. Maybe my sense of unease came from the cramped dimensions of the room or from some ghostlike old man having been performed on the spot 40,000 years earlier in house of Great Chabon, but anyway, I could never seem to get out from life as close. My

writing suffered, my output shrank and all my characters got tangled in knots. It was as if, in some secret part of the office, some malvolent fee had hidden a cloud of kryptonite.

Then one night a big storm advanced to over the bay by El Nino stirred in the roof of the old garage out back. This was a charming but decrepit pile of house clapped with an unspeakable part of garage doors and another, one that don't locked with a padlock and a cheap fire place it was completely engulfed by some ivy plants that went directly taking a sport. It was dark inside, a dirt-floored, spidery old cave that nobody much liked to go into, particularly since we had been told when we bought the house that the roof might at any moment collapse on our heads. But there were hints of mystery in that old shed: glass balls, moldering curtains, random bits of machinery and tools. It always seemed as if in better days it had been a pretty decent place to sharpen the scepter or enter with the cat, while knowing, maybe, to an Oakland Oaks game on the radio. Now it was a complete ruin, no more mention a hazard. It would have to be torn down. I felt the kindly hand of Dr. Shuler at my back. This was the spot where I would found my fortress.

The fortress of solitude is not to be confused with the clubhouse, a shared but in person very different requisite of superheroic communion. The Legion of Superheroes, the Justice League and Justice Society of America, the Avengers all had their private gathering places, sometimes but not always in an isolated location, where they sat around between explosions, jockeying for power, engaging in



SECRET. The new stone shingled structure echoes the look of the main house and provides a refuge where the author (right) can write uninterrupted







gion up the past, is understood it with trail  
visions, unless you're alone. The celebrated  
room of one's own that Virginia Woolf so  
desired was, manifestly, a fantasy of solitude.

One of the relaxing pleasures of my childhood  
was coming across, in the pages of a comic book, a cross-section  
of country design: the house, or Professor Xerxes's School for  
Giblet Youngsters, or the ball house, upside-down rocket ship in  
which the Legion of Superheroes hung out, its contents hence. These  
plans always depicted an orderly but deftly array of two roomed  
seminars, sophisticated gadgets, and bizarre low-bases. Everything  
would be carefully labeled and pointed out with arrows. Naturally  
there would be some variation on the farmhand's pole to get  
you from one part to another. So it was a particular joy for me when  
I got to sit down with the architect we had chosen to help design  
and build my fortress of solitude, the local firm of Friedman Associates,  
to work up a really cool design of my own.

The building code prevented us from putting windows on the two  
sides that shared our neighbor's yard, which ensured to me of

Today, the author's ever-welcome  
guest space is, separately, a full  
house. Much my abiding  
nostalgia comes

brooding, perhaps excessive, tranquility. That was  
all right with me. Like knowing, I mostly work at  
night. And in the daytime I usually prefer not to  
have a nine while I'm crapping what. There are  
few things I would not rather do than write when

the work is going badly, but gazing out the window at some in-  
triguing effect of sunlight or peculiar activity in the neighbor's yard are  
among the most preferable alternatives. So I included the archi-  
tect by ruling out any window on one of the two outer sides of  
the house—the legions, and the one that would have had a view of  
the ever-leaky air that Dr. Shuler planned. On the remaining side  
we did put windows, but we scooped my desk from them with a  
built-in bookcase that prevents me from actually seeing out there  
while I'm at work. Staring at the title of one's accumulated books  
for the afternoon is also preferable to gazing at the keyboard,  
but cut to the same degree as taking in the view. We put in a skylight  
with a northern exposure and hoped for the best.

The building code so cleverly connoitured as a kind of  
appendage to our house, a tiny rifting, did in the same de-censored

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shingles and built along the same general lines. Inside, its features do it: moldings and window trim of lively Spanish cedar supplied by Tito Tinbario (a local dealer in sustainable growth timber), plus built-in painted a subtle gray green, like the sea on a dull afternoon. "We built in a deck, and some cabinets, and provided me with the one register never departed in the rainy days, a half back. There is, for the first time in my life, more room for my books than I [too far] require. Over time I have managed to fill this building with the requisite assortment of literature and vinyl records." When I walk out of the house, down the back steps, and across a short back walk to get here, I truly feel as if I am leaving the civilized world behind, stepping onto the far future home of my nostalgic imagination.

And I went well here. As soon as I resumed work on my next novel, *The Amazing Adventures of Randal & Clay*, at this fortress, things picked up, and I quickly subbed a number of the proj-

*Rich wood floors and trimmings warm up the room and the walls present a muted gray green. Corner bookshelves are the only, while shelves below hold collected volumes.*

jects that had been plaguing me and that book for the while time I sat in the exact same room under the same. But in the two years since I moved my operations into the headquarters, I have made a discovery: I don't work any better here, in my personal paradise, than I have in any of the other places where, over the years, my work has gone well. In the spare bedroom of my former in-law's beach house, or anywhere while my headphones blast Bruce Nauman or Steve Harris, on the glassed-in porch of my grandparents' condo in Coconut Creek, Florida, sitting up or bed with a notebook, in the middle of the night in a hotel room, roused by a sudden thought. Because, of course, the true secret headquarters, the ultimate fortress of solitude, is the space contained within the waxy and unresponsive like air-block of your own skull. And anywhere that I can find or create silence, privacy, and the freedom from one's eyes—anywhere, God forgive me, where there are no children—will do. ■

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BY JOHN RINA  
PHOTOGRAPHS BY NOAH GREENBERG

# GIVING THE KIDS A BATH

Clear lines and quality materials highlight a bathroom designed with children in mind.



The Foxes' former bath had been the least of Sam's (left, in red). 1 When contractor Frank Cerone gave him the keys to get the job, he said there is space to put a window in the room. 2 The plan was to remove the tub to the room and install a window. As the renovated new bath Cerone built is finished, a lot of doors, and an invisible wall—some of which opens by a small push. 3 The result is a room that includes the vanity, the tub, and the room's entry area.

With two small children and another on the way, Bob and Maria Fox knew big changes lay in store for the year 2000, especially for the kids' upstairs bath. Small, outdated, and short on storage, the room needed a major overhaul in order to comfortably accommodate daily hygiene for three. Unfortunately, adding space was not an option. The 5-by-8-foot room sat neatly boxed in by an exterior wall, a hallway with a closet the Foxes were determined to keep, the master bath, and the attic under the lower roof of their 1860s Plainview, New York, split-level. "We wanted desperately to make it bigger," says Maria, "but the room was basically landlocked."

Enter local contractor Frank Cerone. Having worked with the Foxes on previous remodeling projects, Cerone came with a comfort factor, along with an ingenuity that would serve him well in carrying out Maria's





**Work proceeded without a hitch.** Over the week crew pulled in the studs and plumbing and electrical took up dual from adjacent JOISTS, the crew began to carry in the new fixtures, including the tub-**46**

primary dormers. Make the bathroom more efficient, equipment inside the space, find room for new storage, and ease in a red-brown combination, a lavatory, and a vanity with double sinks. "I wanted it to be kid friendly," notes Mark. "But I also wanted top-quality materials—to cost at a classic look that would grow with the children. When they get older, all I'll have to do is change the paint."

Cornia's familiarity with the house proved to be an asset. He immediately thought of two sets of dead space he could utilize for bathrooms. One was a chase that carried JOIST down to the second floor—a canny Cornia had recognized when remodeling the Fones' kitchen a year earlier. The chase had been framed out by the original builder to serve as an end wall for the kitchen, leaving a hollow 14 inches wide, 4 feet deep, and 6 feet high next to the door. The bathroom could also extend a few inches into the attic space behind the tub—a result of the difference in height of the roof in the split-level configuration of the house.

The first corner of business was a complex, to the study gazing of the owner. A one-out spectacular crew removed the old vanity, sink, tub, and toilet, then stripped off old drywall, wood paneling, and wall tiles. They pried up dated ceramic floor tiles and the roof here down to the sub-floors. As they worked, the crew threw debris into plastic garbage bags and carried it out of the house by hand to a waiting truck. Because the plan called for new fixtures in the same positions as the previous ones, the water supply tubes, plumbing drains, and main lines remained in place. Cornia took advantage of the open walls to upgrade the electrical circuit by replacing older two-wire-plus-ground cable with modern three-wire cable. Improvements included ground-fault circuit interrupters (GFCI) receptacles, triggered by code when the meter is located within three feet of a water source, and an exhaust fan on the ceiling.

A section in gipsy released by installing the ceiling was dismantled.



"The ceiling height was only 7½ feet," notes Cornia, "so we considered raising it to the roof joists. But the part of the roof we were under was sagged, so opening the old ceiling there would have revealed an old shingle. In the end, we decided to leave it alone."

As masonry windows on the exterior wall sat remained in place. With heating exposed, Cornia went to work. New 5-13 fiberglass wall insulation and R-19 ceiling insulation replaced older, compressed batts. To preserve floor space and to allow clear access to the wall where that were to fit into the hollow chase wall, he removed the 24-inch-tall door and replaced it with a common wall between the bathroom and the kitchen. Cornia then closed a pocket door. "The pocket door was one of those simple ideas that made a big difference," says Fox. "Now we don't have to bother with a door swing."

To prepare the bath area, Cornia had subcontractor Craig Kanda convert two hours from paint-grade buck plywood. In the newly opened area over the tub, Cornia refinished the wall to accommodate a 12-inch-deep over 13 inches wide by 36 inches high, with three fixed shelves, which he covered on the back and sides with 1-inch rigid foam insulation to prevent heat loss. The back of the finished box projects into the vanity area space. Another cabinet, 12 by 45 by 12 inches deep, with three fixed shelves and four drawers, fit into the chase by the tub.

The outside edges of both bath areas were not covered over. Instead, Kanda beveled them 3 degrees and finished the beams to show the frame.



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edges aligned with the drywall. The drywall contractors built tape and joint compound over the slight depression created by the level, sawtoothing and feathering the joint by adding a drywall knife up top of the level point. The result was a perfectly smooth, flush wall surface right up to the inside edges of the boxes.

Fixing everything required all of a back in such a compact space was a challenge complicated by the fact that the room is oddly shaped, 7 feet wide along the corridor wall, narrows to 5 feet at the doorway wall appears. To camouflage the difference, Corone commissioned web designs for the vanity that would run along the existing wall. First, though, he sketched in markers on the sub-floor to indicate the location for the tub and toilet and a partition wall between the two. The customers revealed how large a space he had to work with. Using 1/2-inch plywood underlayment boards, he showed the homeowners several possible vanity configurations before settling on a modified bathroom design, one half narrowing to 31 inches and the other tapering to a width 16 inches.

Solid surfacing proved to be the ideal countertop material because it could be fabricated to conform to the alcove's curved shape while providing double sinks and a rounded, kid-friendly-radius edge. In keeping with Mark's wish not to have too many projecting surfaces,

the vanity was installed on drywall. To save the vanity as in place, it was a single piece of drywall on the new sub-floor covering with double-secured underlayment. Glass shower doors protect walls by the tub area.

Corone hung a flat mirror over the vanity and covered the medicine cabinet in the side wall, carrying in one's, touch latch door with plywood painted to match the surrounding wall.

Because their kids are young, Bob and Maria expect to be here again for many years. In the future they intend to enclose the sub-and-shower combo with sliding glass doors, which are being

scored in the basement for the same house.

Mark's design advice called for a mix of vintage and natural colors and for classic materials with timeless appeal, but he did make an exception: sparkling clear 1/2-inch-square glass mosaic tiles for the tub surround (see "High Glass," below). "I'd seen it in a magazine and I kept coming back to it," she says. "I loved the way glass tiles change color depending on the light and the way you look at them."

Corone installed 1/2-inch-square beige tumbled marble tiles on the floor, covering the wooden subfloor with tar paper and laid down the tiles in a cement-and-sand base. For the vanity base, Mark chose marble with a veined finish. To spend just a bit of spiritide toward, Maria had Corone cut a few of the glass tiles into the tumbled-marble floor tiles. "We love it all, and the look adds it, too," she says of the \$17,800 remodel. "They can't wait to make a bath, and then we can get there to bid that much quicker!" ■

## HIGH GLASS



Glass tiles are gaining acceptance as a substitute for ceramic tiles, especially for interior use. They are installed using traditional tile-setting techniques, although they do not feature grout, and they require plastic spacers to keep great lines uniform. Tiles made of glass may have sharp edges and require careful handling. They are also expensive. At a minimum of \$40 per square foot for the tiles alone, they approach the premium range, a price the homeowners were willing to pay because of the relatively small area—about 83 square feet—being covered. The main appeal of glass tiles in their unusual look. They are available in different species, but translucent varieties are popular for their soft, stone-like quality. Because the glass transmits light, great entry can offset the look of the installed tiles. Most manufacturers recommend white grout, but Mark selected a greenish-blue sand grout that complemented the watery look of the tile field.

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Richard Dwyer, plumbing  
and heating expert; and Norm  
Abram, master carpenter

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Linda Marie soon recognized that the property, with its agreeable climate and healthy soil, would be an ideal spot to garden. She hoped to partly let hobby turn a business by starting an organic herb farm on part of her 60 acres and planned to hold cooking classes in her house. Both were dreams she'd let sit on the back burner during her years as a chef.

Once she and her two sons moved in, Linda Marie realized that certain aspects of the house that had been easy to overlook as a weekend home—like the fact that the pulley-style kitchen offered barely enough elbowroom to prepare their meals a day—would not be tolerable in a full-time residence. Even so, when she thought about

remodeling, her usual goal was modest: to update the kitchen—a single-story life-size addition to the farmhouse—and expand a bit. “I’m sure that’s all I wanted,” she says now, two years later, but as her land more than 50 contractors in what turned out to be a far more ambitious floorboards-to-cupola renovation, featuring a spectacular, no-holds-barred cooking area.

As Linda-Marie named her new job a web site for a chef-worship culinary website, she began to suspect that the odds might be more involved than she thought, so she approached San Francisco-based designer Lou Ann Bauer, whose work had been recommended by a friend. “I wanted lots of light, lots of storage, glass-front cabinets, and professional appliances,” she explains. “I told Lou I am *not* used to a pure wall oven, plus rice dishwashers for my cleaners. I just didn’t have the imagination to make it all happen.”

But when Bauer and Charles Cousins, her project manager at Bauer Interiors Design, toured the house, they understood at once that the kitchen was far from insignificant. “The only bath issue didn’t function well, and with two kids, Linda-Marie needed another,” says Bauer. “The four upstairs bedrooms—in a converted attic—had low ceilings, with limited natural light coming in through some small 70s-era shed dormers. And the only way to reach the second story was by an exterior stair that ran up alongside the kitchen.” In brief, “nothing worked the way,” Linda Marie says.



#### COUNTER FITTING

Don't let the distinctive drawing (above) fool you. At roughly 124 by 63 inches, the house's marble island countertop is the largest that Brian Grusa, owner of Mobile European Style, has ever installed. Weighing some 720 pounds, it took the strength of eight men and much of Grusa's stored stamina to get it in place. “I was so nervous, I couldn’t talk for hours afterward,” he says, noting that a fractured rib, in addition to being utterly worthless, can cut into a hand as sharply as a shard of glass.

Grusa had already invested many man-hours in the diamond-bladed stone, prepping the stone. After cutting the 5-foot stone to size with a diamond-bladed bridge saw, he gave its edge extra heft by installing a 3½-inch-high marble strip underneath the rim. Next, he used a router to create an eased edge and gave the entire surface a hand-finish with 800-grit diamond sandpaper turned on a handheld angle sander. Finally, he rubbed in a sealer to repel oil and moisture, tested the slab onto an A-frame, and drove it 60 miles to Linda-Marie’s home.

Once there, 16 hands moved the slab heads to set it onto the island’s plywood top. Each settling spray vibrated any trapped air bubbles. Unfortunately, Grusa didn’t wait long following the seven vital touch stones. He cut out the 71 by 27-inch notch for the range with a diamond-bladed hand grinder, gave the work a final touch-polish, and let out a well-earned sigh of relief. —Dan Sacher



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—CAR ANN BAKER, INTERIOR DESIGNER

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The table is a perfect example of the French style, and it is a true work of art. The table is a perfect example of the French style, and it is a true work of art. The table is a perfect example of the French style, and it is a true work of art. The table is a perfect example of the French style, and it is a true work of art.

Outfitted with a French country style, the dining room is a masterpiece of craftsmanship. It is a true work of art, and it is a pleasure to use it. The table is a perfect example of the French style, and it is a true work of art.



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up the columns, from 2x12s to 6x12s, then installed a fine stone that runs from the top of the head to the railing and attached it to the columns with four-point lag bolts. (The strengthened railing also helps support a windowed cupola.) To build the vaulted ceiling and the added weight of the head (and to allow for easy in the event of an earthquake), Sawyer had his crew use two threaded rods through a pair of decorative tie beams, bolted in with

where-painted bolts, that span the stone on either side of the stone. These and other decorative touches provide visual interest, in keeping with the Victorian style of the house.

The kitchen renovation started a domino effect in the downstairs of the house. "Lisa Ann just kept saying, 'Trust me,' and I did," Linda Marie says with a laugh. For example, there had been no dining room in the house, so Sawyer designed one—as an insulated

*above: Work progresses on the raised deck along the back of the house. Top: Floor plans illustrate how the kitchen and family room have been joined and enlarged, and where the conservatory dining room was placed.*

13 by 15-foot, polystyrene conservatory that extends onto a deck off the kitchen and often spectators' noses. On the revamped deck, Carlisle had outdoor head milled to match existing ones on the front of the house (see "Red Call"), but with spaces reconfigured to meet modern building codes. Finally, according to the siding, alternate with lamps that light the deck.

As a final flourish, Sawyer even managed to take care of a couple of details outside the scope of the job. One day, the friend Linda-Marie about her current beyond cooking. Linda-Marie mentioned that she loved making real going to the theater. Lisa Ann then suggested that she meet her brother, Rod Baxter, himself a passionate rock, who shows these movies. Once again, Linda-Marie went along with the plan. In the end, she purchased only a new house but a new husband and name: Linda Marie Baxter. ■

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# COMING UP ROSES

Climbers and ramblers will cover a trellis, an arbor, even a shed roof, with a profusion of blooms

BY PETRA H. FOSSEL

Rosarian Mike Lowe with everything from hybrid shrubs to old English varieties at his Nichols, New Hampshire, nursery. Lowe's Roses Take a tour of his own two-acre property, though, and it becomes clear that he knows roses with a climbing habit. The landscape is divided into half a dozen "garden rooms," dominated by the placement of rose walls, wood fences, arbors, and greenhouses, most of which cascade with blooming roses each spring. These rambling roses give the space a colorful and natural appearance, as if even the architectural features had grown up from the ground. "I get changing views through the seasons—bare canes and red hips against gutters or wood in fall, dark green foliage when the blooms have past, and, of course, the profusion of bright red, pink, yellow, and white flowers when they're at their peak," says the 40-year veteran of rose growing.

Young roses come in two primary types: climbers and ramblers. Both categories contain dozens of varieties that will trail along fences, climb up trellises, cascade hangovers, and cover weathered sheds. And though roseurs don't always agree on which rose looking in which direction,



SPRING, TOO. "Roses can take an old saying: 'Water a rose, then water it again,'" says Mike Lowe's nursery. Just Mike Lowe, who makes sure each of his roses gets the golden rule of water, a sunny, sheltered, well-drained place. Lowe's Roses is a family, three-generation business and does roses, shrubs, trees, and more. With its training, the plants cover the deeply thermal American film studio since their way between great photos.

## BUILDING A VINE RACK

Climbing vines look great growing on anything, but a pergola—a wood trellis roof supported by columns—provides a framework on which to showcase their construction beauty. A pergola takes up little ground space while yielding big results overhead, so it was a no-brainer choice for the backyard at this 6th-floor project in West Palm Beach, Florida. E.O. H. master carpenter Norm Adams built a 6-foot-tall version that runs from the residence to the pool

house, providing a gateway between the driveway and the swimming pool. Adams crafted the wood structure in the pergola-hut style using rough-cut cedar, the renewable composite of which naturally repels insects and fungi. It consists of a 10-foot beam covered by 10 vertical outriggers. These Norm topped with cross rails running the length of the beam. —Ryan Robbins



Norm attaches an outrigger to the beam every 10 inches using a half-lap joint—created by notching the beam and outrigger so they mate together like Lincoln Logs. To make the beam, he cuts a series of 10-inch-deep kerfs with a circular saw that leaves every the remaining material (1) and smooths the surface with a hand plane and chisel.



To attach the outriggers to the beam, Norm uses a saw to cut a half-lap joint into the end of the 10-foot beam (2). Rather than using the long 10-foot lengths through a series of hand saws, he smooths the beam and drives the tool—which is set on center—through the wood. To assemble, he fits the sections together, making sure that each outrigger sits squarely against the beam (3).



Next, Norm drives a 3-inch lag screw into the top of each joint (4), counter-sinking the heads and filling the hole with a color plug. The lag top only got fastened with a single screw and a multi-drilled pilot hole (5).



Ironing again helps to position the pergola on the steel post (6), where it is locked in place with a 6-inch lag screw. Since the post is not counter-sunk into the beam, the counter-sink hole is not needed. The counter-sink hole is not needed. The counter-sink hole is not needed.

PHOTO: RYAN ROBBINS

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"Don't put a yellow del in your bush on a yellow cent hole," says Lowe (10), whose reds get a little from Rosebud's are significant with the white, mature flowering pink (1000) short day water when the roots can sit it. After he picks the rose with an 11-cent, he water thoroughly.

Plants don't discuss a reputation as tricky growers, says Jill Bernard, a Henderson, Nevada-based consulting specialist for the American Rose Society about their given side up, water until the winter rains, and you're almost guaranteed success.

If she's planting a bare-root rose (one which has lost the soil removed for mail-order delivery), Bernard begins by soaking the roots in water for 12 hours. For any rose, she digs a hole 2 feet wide and 2 feet deep. Most rose roots grow only 12 inches, but they require lots of nutrients and won't tolerate standing water, she says. The roots depth prevents frost damage, especially important in heavy clay soils that keep water beneath the surface. Sandy loam drains better, requiring only 10-inch holes.

Bernard applies 1 cup superphosphate or bonemeal around the base of the hole to promote root development. If the rose is grafted, its root ball can easily be cut into the north. The rose will break into the hole and then a few inches of its roots in circulation in a growth. For bare-root plants, she then prunes back the rose length to 6-8 inches. If the plant is to be potted, the roots must be able to touch the top of the pot, she says. If roses are twice the size of the roots, the top growth will be healthy.

For Blue, she blends equal parts garden soil and organic amendments, such as compost, manure, and peat, which provide a steady supply of nutrients all season as they decompose. This mixture gets a nutrient boost from a blend of slow-release organic fertilizers: 5 cup bonemeal, 1 cup cottonseed meal, and 3 cup blood meal (all available at garden stores). Chemical fertilizers provide immediate relief but can burn the roots of new rose plants. To ease the stress in a hole a second in the bottom of the hole and into the plant as it, keeping the roots into it. For grafted roses, the center of the crown, the deeper the hole post should be set into the earth. You may also need to adjust the soil acidity level. Ask your supplier for advice. After filling the hole, she waters heavily.

Each spring Bernard fertilizes with a solution of 1 cup bonemeal, 1 cup cottonseed meal, 1 cup blood meal, and 1 cup superphosphate. To apply the mixture, she first waters the plant thoroughly, then soaks the soil surface with the soil surface using a hand trowel, and waters again. After that initial treatment, she feeds the rose once a month with a 15-10-10 (nitrogen-phosphorus-potassium) water-soluble fertilizer applied to the base of the plant (follow the directions on the package). The water rose tea solution weekly when Mother Nature doesn't do the job for her.



The Lady Banks rose is 21 feet tall and requires two days a steady stream of water and the warm temperatures of a southern climate, hence the frost-free, drought-resistant rose is not a cold winter.

hardy, mature rosebush (plant) underground part) of another variety. This gives the rose a head start. In their first year, grafted roses grow bigger and bloom better than ungrafted roses, because they come with an already established root system. But root-grafted roses on their own rootstock will catch up by the second or third season (when both types will reach mature size), and they have a distinct advantage. "They never send out suckers," Lowe explains. Suckers are sprouts by the roots to spread the rose, usually sterile, stem and flowers—which can overtake the more valuable variety on top. That's much like buying a Golden Delicious apple tree, only to find that the roots send up crab apple shoots every spring.

Both Lowe and Parson recommend buying grafted roses whenever possible, but "if you do buy a grafted rose, be sure to get a grade 1 or 14 plant," Lowe says. Grafted roses are graded based on the number of vigorous canes the bush is a number 1, which has three or more 14-inch canes, number 14 has two 13-inch canes, and number 2 has two 12-inch canes. The number should be listed on the label or a sign hanging above the plants. "Some people think they can buy a grade 2 and remove it into a grade 1 plant, but you can't," says Parson. "If you buy a 2, a well-set flower."

Getting over a top-quality choice is one thing, but getting over winter cold is not. Thus a necessary fix, many other roses, but the populus of wondrous flowers—a trellis, says Lowe. Not only will they provide roses roses (and a privacy screen) in a garden or on a house's facade, their continuous bloomers add a heart-stopping grace note to the landscape. ■



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## bathroom **sinks**

Few household items have been around as long—and evolved as little—as the sink. Even prehistoric people wiped their hands and faces in running bowls of water, but it wasn't until the mid-19th century that Western European and American housewives devised a separate room for routine washing. Today the sink occupies a prominent location in the bathroom and during a remodel is often a focal point of the redesign. Manufacturers offer

a wide range of styles, from low-profile reproductions that mimic the white stone basins of a century ago to contemporary sculptural vessels rendered in stone, glass, wood—even precious metals.

Prices for bathroom sinks range from \$60 to \$4,000 and up, depending upon design and material. A final point: The selection of a sink is seldom made without considering the faucet that would suit it best. How should it be. The accessible should appear adjacent and harmonious with the control bank of the room. Three-hole sinks are predicated on that the distance between the hot and cold handles is either 4 inches (center-to-center) or 8 to 12 inches (just beyond). Lower-style, single-handle faucets fit single-hole or deck. Basins mounted on top of the counter have no holes; faucets for this style are installed on the countertop or on the wall behind the sink.



BY JOHN RINE

PHOTOGRAPHS BY GABRIELLA IMPERATORI/STYL

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The Old  
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MAGAZINE

1) Super Group's Happy D wall mount basin for women comes in a range of sizes, including the 20½-by-20½-inch, 8-inch-deep one featured here. 2) Inspired by a Japanese bowl, the 18½-by-14½-inch, 6½-inch-deep Batoua vessel from Kohler sits atop a counter; the faucet must be installed on a wall behind or to the side of it. 3) Sapped when alone, the 18½-inch-round, 8-inch-deep Crique vessel from Peerless is to be dropped into a counter at any of three levels, it may sit on top, too. 4) Watersmark's 12-inch-round, 4½-inch-deep, apple-sided Hamlet Basin is pigmented the soft shade of antique cut-crystals. 5) At a mere 9 by 7½ inches, Barbara Barry's 2½-inch-deep Dressing Table for Her basin suits a small bath or powder room. 6) By contrast, the 31½-by-19½-inch Allora wall-mount from Hantags requires ample clearance, its shallow bowl tapers from 2½ to 1½ inches deep, back to front. 7) The self-cleaning, 24½-by-18-inch, 3½-inch-deep Antiquity Countertop Laundry from American Standard has a gently curved substrate that adds refinement to the bath.



## MATERIALS

Now that the bathroom receives as much attention as do the any other room in the house, manufacturers of sinks are responding with a wide selection of materials to please every aesthetic sensibility.

**WITHESSON CHINA.** The standard of fine bathroom fixtures. Temperatures of 2,300 degrees Fahrenheit glass and fuse the surface grains of china impregnated clay, thereby forming it—and any glass used to seal and color it—into a monolithic, glasslike bond.

**ENAMELCLAY.** Popular in Europe but relatively new to U.S. markets. Similar to the clay used to make brick, liners for fireplaces. Often chosen to form bowls with a sculptural, hand-crafted look. Absorbs moisture unless it's protected by enamel glaze.

**SOLID SURFACE.** Made from a blend of acrylic and polyesters that resists stains and is impervious to water. Typically formed on a stainless steel integrating bowl and easily overdraping. Can mimic marble or stone.

**CULTURED MARBLE.** A less-expensive cousin of solid surfacing. Blend-

ing plastic resins and marble chips. Used for integral vanity top/solid units. Must be sealed to prevent water absorption.

**STONE.** Marble, granite, and soapstone offer natural beauty, especially for vessel styles. Marble needs to prevent stains, undermount models may require extra support to carry their weight.

**GLASS.** Usually incised to a 1- to 1-1/2-inch thickness. Often crafted like sculpture. Some styles incorporate handles, spouts, and splashes of color; others are engraved or frosted like fine crystal.

**WOOD.** Formed from carved or turned hardwood—such as maple or maple impregnated with epoxy resins, then sealed with lacquer or polyurethane to prevent moisture absorption.

**CONCRETE.** Provides the heft of stone at a lower cost. May be impregnated with pigments, applied as porcelain glazes, or embedded on the surface.

**METAL.** Chelone metal (brass, bronze, copper, nickel, polished steel) form sinks—even gold-plated brass. Platin is suitable to cookware.

## waterpicks



## STYLES

**SELF-MOUNTING** or **DROP-IN** sinks feature rolled edges designed to overlap the countertop and support the weight of a basin suspended in a natural hole. **UNDERMOUNT** models attach with clips to the underside of a countertop. **WALL-MOUNT** sinks can be offered at any height. Styles with narrow bowls or bowls that fit into corners prove practical for tight spaces, such as powder rooms. Flanking is expanding; some manufacturers offer decorative P-traps or porcelain surrounds that conceal the waste. A wire-style variation, the **CONSOLE**—often equipped with lowest drain—receives extra support from a pair of legs. Molded or solid overdraping is called **OVERDRAP**, sinks with the bowl and countertop in one seamless unit, which may fit into a vanity or be used as a console or wall-mount. **REARMOUNT** or **PI-PUR** feature set on washbasins. **VESSEL** or **ABOVE-MOUNT** sinks are sculptural bowls that sit on top of a counter. Because the bowl adds inches to a vanity, the cabinet is usually built lower than the norm, to maintain the standard overall height of 36 inches.

## DIRECTORY

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PHOTOGRAPH BY JEFFREY M. HARRIS

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## WHERE TO FIND IT

### OUTTAKES pp. 16-18

Chrisheide re: Rick Roedel of Roedel Peak Erickson Architects Inc., Lexington, MA, 781-843-1113. Lexington Historical Society, Lexington, MA, 781-843-1703. www.lexingtonma.org



"Outtakes," p. 16: The 1847 steel depot (left) at Two Sides is a remnant of Lexington, Massachusetts, and is now a museum and visitor center.

### HOUSE CALLS WITH STEVE pp. 20-24

Architect Thomas W. Hemmick, New York, NY, 212-334-4431. General contractors: David Peley and Joe Vosey, Gold Coast Custom Builders and Fine Interiors, Glen Head, NY, 516-799-3385.

Yacht: Richardson Yachts, St. Thomas, U.S. Virgin Islands, 340-334-2284. www.richardsonyachts.com

Well-known sink: Borden, imported by De Vito, New York, NY, 212-343-5406. Plumbing hardware and grab bars: Concord, 800-314-9993. www.concordusa.com

Tile: Ann Sachs Tile & Stone, 800-274-8433. www.annsaichs.com. Architect: David Street Clark, Charlotte Gardens, 800-463-8114. www.charlottegardens.com

### ASK NORM pp. 27-31

For more information on gas boilers: Gas



"Eastern Eden," p. 38: Despite such a small window, the Japanese heritage of the facade is the pride of a Colorado home.

Appliances: Manufacturers Association, Arlington, VA, 703-525-7946. www.manassas.org

Gas boiler efficiency for American Council on Energy Efficiency: Energy, Washington, D.C., 202-429-0863. www.acee.org

Our thanks to: Ron Ralibach, Concord Veterinary Laboratory of Omaha, NE.

### LUXURIES: EASTERN BORN pp. 22-25

Architect: DZ Architects, Denver, CO, 303-861-5794. Contractor: Kellen Energy Construction, Englewood, CO, 303-783-3116. Interior design: Richard Lee Interiors Design, New York, NY, 212-763-3197. Landscape architect: Mays, Boulder, CO, 303-442-3220.

Japanese music: Wata Joraku from K&K Inc., New York, NY, 212-738-2538. www.watajoraku.com

### MATERIALS: PEX APPEAL pp. 26-30

PEX tubing: Blue and red PEX manufactured by Vanguard Piping Systems Inc., Madison, KS, 800-773-3539. www.vanguardpipe.com. PEX used in

## WHERE TO FIND IT

### TECHNOLOGY pp. 40-43

Refrigeration: Wharfedale With Tilden, Wharfedale, Boston, MA, 800-251-1301. www.wharfedale.com

Washer and dryer: Neptune by Maytag, Cleveland, TN, 800-683-9900. www.maytag.com

Chef: TurboChef YR2001, TurboChef Technologies, Dallas, TX, 214-379-6000. www.turbochef.com

**Heavy Duty Electric Brad Nail Gun**

**ET100™ Nail Master**

- Ergonomic Design
- Durable
- Powerful

10 Nails

Removable Nail-Magazine Bumper

Shoots 3 Different Length Brads

1" (30mm)

1 1/2" (38mm)

2" (51mm)

3" (76mm)

4" (102mm)

5" (127mm)

6" (152mm)

7" (178mm)

8" (203mm)

9" (229mm)

10" (254mm)

11" (279mm)

12" (305mm)

13" (330mm)

14" (355mm)

15" (381mm)

16" (406mm)

17" (432mm)

18" (457mm)

19" (483mm)

20" (508mm)

21" (533mm)

22" (559mm)

23" (584mm)

24" (610mm)

25" (635mm)

26" (660mm)

27" (686mm)

28" (711mm)

29" (736mm)

30" (762mm)

31" (787mm)

32" (813mm)

33" (838mm)

34" (863mm)

35" (889mm)

36" (914mm)

37" (939mm)

38" (965mm)

39" (990mm)

40" (1016mm)

41" (1041mm)

42" (1067mm)

43" (1092mm)

44" (1117mm)

45" (1143mm)

46" (1168mm)

47" (1193mm)

48" (1219mm)

49" (1244mm)

50" (1270mm)

51" (1295mm)

52" (1320mm)

53" (1346mm)

54" (1371mm)

55" (1396mm)

56" (1422mm)

57" (1447mm)

58" (1472mm)

59" (1498mm)

60" (1523mm)

61" (1548mm)

62" (1573mm)

63" (1600mm)

64" (1625mm)

65" (1650mm)

66" (1676mm)

67" (1701mm)

68" (1726mm)

69" (1752mm)

70" (1777mm)

71" (1802mm)

72" (1827mm)

73" (1853mm)

74" (1878mm)

75" (1903mm)

76" (1929mm)

77" (1954mm)

78" (1979mm)

79" (2004mm)

80" (2030mm)

81" (2055mm)

82" (2080mm)

83" (2106mm)

84" (2131mm)

85" (2156mm)

86" (2182mm)

87" (2207mm)

88" (2232mm)

89" (2257mm)

90" (2283mm)

91" (2308mm)

92" (2333mm)

93" (2358mm)

94" (2384mm)

95" (2409mm)

96" (2434mm)

97" (2459mm)

98" (2484mm)

99" (2510mm)

100" (2535mm)

101" (2560mm)

102" (2586mm)

103" (2611mm)

104" (2636mm)

105" (2661mm)

106" (2687mm)

107" (2712mm)

108" (2737mm)

109" (2762mm)

110" (2787mm)

111" (2813mm)

112" (2838mm)

113" (2863mm)

114" (2888mm)

115" (2914mm)

116" (2939mm)

117" (2964mm)

118" (2989mm)

119" (3014mm)

120" (3040mm)

121" (3065mm)

122" (3090mm)

123" (3115mm)

124" (3141mm)

125" (3166mm)

126" (3191mm)

127" (3216mm)

128" (3241mm)

129" (3267mm)

130" (3292mm)

131" (3317mm)

132" (3342mm)

133" (3368mm)

134" (3393mm)

135" (3418mm)

136" (3443mm)

137" (3468mm)

138" (3493mm)

139" (3519mm)

140" (3544mm)

141" (3569mm)

142" (3594mm)

143" (3619mm)

144" (3645mm)

145" (3670mm)

146" (3695mm)

147" (3720mm)

148" (3745mm)

149" (3771mm)

150" (3796mm)

151" (3821mm)

152" (3846mm)

153" (3872mm)

154" (3897mm)

155" (3922mm)

156" (3947mm)

157" (3972mm)

158" (3998mm)

159" (4023mm)

160" (4048mm)

161" (4073mm)

162" (4098mm)

163" (4124mm)

164" (4149mm)

165" (4174mm)

166" (4199mm)

167" (4224mm)

168" (4250mm)

169" (4275mm)

170" (4300mm)

171" (4325mm)

172" (4350mm)

173" (4376mm)

174" (4401mm)

175" (4426mm)

176" (4451mm)

177" (4476mm)

178" (4502mm)

179" (4527mm)

180" (4552mm)

181" (4577mm)

182" (4602mm)

183" (4628mm)

184" (4653mm)

185" (4678mm)

186" (4703mm)

187" (4728mm)

188" (4754mm)

189" (4779mm)

190" (4804mm)

191" (4829mm)

192" (4854mm)

193" (4880mm)

194" (4905mm)

195" (4930mm)

196" (4955mm)

197" (4980mm)

198" (5006mm)

199" (5031mm)

200" (5056mm)

201" (5081mm)

202" (5106mm)

203" (5132mm)

204" (5157mm)

205" (5182mm)

206" (5207mm)

207" (5232mm)

208" (5258mm)

209" (5283mm)

210" (5308mm)

211" (5333mm)

212" (5358mm)

213" (5384mm)

214" (5409mm)

215" (5434mm)

216" (5459mm)

217" (5484mm)

218" (5510mm)

219" (5535mm)

220" (5560mm)

221" (5585mm)

222" (5610mm)

223" (5636mm)

224" (5661mm)

225" (5686mm)

226" (5711mm)

227" (5736mm)

228" (5762mm)

229" (5787mm)

230" (5812mm)

231" (5837mm)

232" (5862mm)

233" (5888mm)

234" (5913mm)

235" (5938mm)

236" (5963mm)

237" (5988mm)

238" (6014mm)

239" (6039mm)

240" (6064mm)

241" (6089mm)

242" (6114mm)

243" (6140mm)

244" (6165mm)

245" (6190mm)

246" (6215mm)

247" (6240mm)

248" (6266mm)

249" (6291mm)

250" (6316mm)

251" (6341mm)

252" (6366mm)

253" (6392mm)

254" (6417mm)

255" (6442mm)

256" (6467mm)

257" (6492mm)

258" (6518mm)

259" (6543mm)

260" (6568mm)

261" (6593mm)

262" (6618mm)

263" (6644mm)

264" (6669mm)

265" (6694mm)

266" (6719mm)

267" (6744mm)

268" (6770mm)

269" (6795mm)

270" (6820mm)

271" (6845mm)

272" (6870mm)

273" (6896mm)

274" (6921mm)

275" (6946mm)

276" (6971mm)

277" (6996mm)

278" (7022mm)

279" (7047mm)

280" (7072mm)

281" (7097mm)

282" (7122mm)

283" (7148mm)

284" (7173mm)

285" (7198mm)

286" (7223mm)

287" (7248mm)

288" (7274mm)

289" (7299mm)

290" (7324mm)

291" (7349mm)

292" (7374mm)

293" (7400mm)

294" (7425mm)

295" (7450mm)

296" (7475mm)

297" (7500mm)

298" (7526mm)

299" (7551mm)

300" (7576mm)

301" (7601mm)

302" (7626mm)

303" (7652mm)

304" (7677mm)

305" (7702mm)

306" (7727mm)

307" (7752mm)

308" (7778mm)

309" (7803mm)

310" (7828mm)

311" (7853mm)

312" (7878mm)

313" (7904mm)

314" (7929mm)

315" (7954mm)

316" (7979mm)

317" (8004mm)

318" (8030mm)

319" (8055mm)

320" (8080mm)

321" (8105mm)

322" (8130mm)

323" (8156mm)

324" (8181mm)

325" (8206mm)

326" (8231mm)

327" (8256mm)

328" (8282mm)

329" (8307mm)

330" (8332mm)

331" (8357mm)

332" (8382mm)

333" (8408mm)

334" (8433mm)

335" (8458mm)

336" (8483mm)

337" (8508mm)

338" (8534mm)

339" (8559mm)

340" (8584mm)

341" (8609mm)

342" (8634mm)

343" (8660mm)

344" (8685mm)

345" (8710mm)

346" (8735mm)

347" (8760mm)

348" (8786mm)

349" (8811mm)

350" (8836mm)

351" (8861mm)

352" (8886mm)

353" (8912mm)

354" (8937mm)

355" (8962mm)

356" (8987mm)

357" (9012mm)

358" (9038mm)

359" (9063mm)

360" (9088mm)

361" (9113mm)

362" (9138mm)

363" (9164mm)

364" (9189mm)

365" (9214mm)

366" (9239mm)

367" (9264mm)

368" (9290mm)

369" (9315mm)

370" (9340mm)

371" (9365mm)

372" (9390mm)

373" (9416mm)

374" (9441mm)

375" (9466mm)

376" (9491mm)

377" (9516mm)

378" (9542mm)

379" (9567mm)

380" (9592mm)

381" (9617mm)

382" (9643mm)

383" (9668mm)

384" (9693mm)

385" (9718mm)

386" (9743mm)

387" (9769mm)

388" (9794mm)

389" (9819mm)

390" (9844mm)

391" (9869mm)

392" (9895mm)

393" (9920mm)

394" (9945mm)

395" (9970mm)

396" (9996mm)

397" (10021mm)

398" (10046mm)

399" (10071mm)

400" (10096mm)

401" (10122mm)

402" (10147mm)

403" (10172mm)

404" (10197mm)

405" (10223mm)

406" (10248mm)

407" (10273mm)

408" (10298mm)

409" (10323mm)

410" (10349mm)

411" (10374mm)

412" (10399mm)

413" (10424mm)

414" (10449mm)

415" (10475mm)

416" (10500mm)

417" (10525mm)

418" (10550mm)

419" (10576mm)

420" (10601mm)

421" (10626mm)

422" (10651mm)

423" (10676mm)

424" (10702mm)

425" (10727mm)

426" (10752mm)

427" (10777mm)

428" (10803mm)

429" (10828mm)

430" (10853mm)

431" (10878mm)

432" (10904mm)

433" (10929mm)

434" (10954mm)

435" (10979mm)

436" (11005mm)

437" (11030mm)

438" (11055mm)

439" (11080mm)

440" (11106mm)

441" (11131mm)

442" (11156mm)

443" (11181mm)

444" (11207mm)

445" (11232mm)

446" (11257mm)

447" (11282mm)

448" (11308mm)

449" (11333mm)

450" (11358mm)

451" (11383mm)

452" (11409mm)

453" (11434mm)

454" (11459mm)

455" (11484mm)

456" (11510mm)

457" (11535mm)

458" (11560mm)

459" (11585mm)

460" (11611mm)

461" (11636mm)

462" (11661mm)

463" (11686mm)

464" (11712mm)

465" (11737mm)

466" (11762mm)

467" (11787mm)

468" (11813mm)

469" (11838mm)

470" (11863mm)

471" (11888mm)

472" (11914mm)

473" (11939mm)

474" (11964mm)

475" (11989mm)

476" (12015mm)

477" (12040mm)

478" (12065mm)

479" (12090mm)

480" (12116mm)

481" (12141mm)

482" (12166mm)

483" (12191mm)

484" (12217mm)

485" (12242mm)

486" (12267mm)

487" (12292mm)

488" (12318mm)

489" (12343mm)

490" (12368mm)

491" (12393mm)

492" (12419mm)

493" (12444mm)

494" (12469mm)

495" (12494mm)

496" (12520mm)

497" (12545mm)

498" (12570mm)

499" (12595mm)

500" (12621mm)

501" (12646mm)

502" (12671mm)

503" (12696mm)

504" (12722mm)

505" (12747mm)

506" (12772mm)

507" (12797mm)

508" (12823mm)

509" (12848mm)

510" (12873mm)

511" (12898mm)

512" (12924mm)

513" (12949mm)

514" (12974mm)

515" (13000mm)

516" (13025mm)

517" (13050mm)

518" (13075mm)

519" (13101mm)

520" (13126mm)

521" (13151mm)

522" (13176mm)

523" (13202mm)

524" (13227mm)

525" (13252mm)

526" (13277mm)

527" (13303mm)

528" (13328mm)

529" (13353mm)

530" (13378mm)

531" (13404mm)

532" (13429mm)

533" (13454mm)

534" (13480mm)

535" (13505mm)

536" (13530mm)

537" (13555mm)

538" (13581mm)

539" (13606mm)

540" (13631mm)

541" (13656mm)

542" (13682mm)

543" (13707mm)

544" (13732mm)

545" (13757mm)

546" (13783mm)

547" (13808mm)

548" (13833mm)

549" (13858mm)

550" (13884mm)

551" (13909mm)

552" (13934mm)

553" (13959mm)

554" (13985mm)

555" (14010mm)

556" (14035mm)

557" (14060mm)

558" (14086mm)

559" (14111mm)

560" (14136mm)

561" (14161mm)

562" (14187mm)

563" (14212mm)

564" (14237mm)

565" (14262mm)

566" (14288mm)

567" (14313mm)

568" (14338mm)

569" (14363mm)

570" (14389mm)

571" (14414mm)

572" (14439mm)

573" (14464mm)

574" (14490mm)

575" (14515mm)

576" (14540mm)

577" (14565mm)

578" (14591mm)

579" (14616mm)

580" (14641mm)

581" (14666mm)

582" (14692mm)

583" (14717mm)

584" (14742mm)

585" (14767mm)

586" (14793mm)

587" (14818mm)

588" (14843mm)

589" (14868mm)

590" (14894mm)

591" (14919mm)

592" (14944mm)

593" (14969mm)

594" (14995mm)

595" (15020mm)

596" (15045mm)

597" (15070mm)

598" (15096mm)

599" (15121mm)

600" (15146mm)

601" (15171mm)

602" (15197mm)

603" (15222mm)

604" (15247mm)

605" (15272mm)

606" (15298mm)

607" (15323mm)

608" (15348mm)

609" (15373mm)

610" (15399mm)

611" (15424mm)

612" (15449mm)

613" (15474mm)

614" (15500mm)

615" (15525mm)

616" (15550mm)

617" (15575mm)

618" (15601mm)

619" (15626mm)

620" (15651mm)

621" (15676mm)

622" (15702mm)

623" (15727mm)

624" (15752mm)

625" (15777mm)

626" (15803mm)

627" (15828mm)

628" (15853mm)

**BY DESIGN: SHELF HELP**  
pp. 64-66

Kitchen designer Mary Jo Perrone Inc., Enfield, CT, 800.775.4763.  
Kitchen consultant, Inc. Robinson, Alter and Kitchen Cores, Woburn, MA, 781.932.1806.  
Architect: Matthew Vederman, New York, NY, 212.367.8733.  
Cabinetry design: Jeff Porey, Kesselher Company, Kennebunk, ME, 207.443.2131.  
Slide-on under-counter KnitWood Cabinetry, 800.435.4559, [www.knitwood.com](http://www.knitwood.com).  
Wine shelving system: Young Oak, Hialeah, Florida, 800.433.2531, [www.hialeahyoung.com](http://www.hialeahyoung.com).  
Pull-out pantry: KnitWood Cabinetry.

**TRANSFORMATIONS: LOUISIANA PURCHASE**  
pp. 60-62

General contractor: Frank McMeans, Coates Angstrom, Baton Rouge, LA, 225.344.7099.  
Architect: Rick Conway, Baton Rouge, LA, 225.381.6411.

**TALKING SHOP: CLEAR THE WAY**  
pp. 66-68

Drum machine: model 867888, Ridge Tool Company, Elms, OR, 800.718.7743, [www.ridge.com](http://www.ridge.com).  
Power tools: Sunbelt Drive Cleaning Machine, D.H. Sales, Portland, OR, 800.634.2548.  
Client target: Extensioneers, model #RFB116, Morse Products Company, Sylmar, CA, 800.972.8721, [www.extensioneers.com](http://www.extensioneers.com).  
Kitchen sink: Inset (transit) model #RFB06315, Whitman's Collection, West Haven, CT, 800.527.6690, [www.whitmanscollection.com](http://www.whitmanscollection.com).  
Flat sink: More Inc., Elms, OH, 800.339.6636.  
Hand sprayer with drill option: Mini-Stop Sealer, Marco Products Company, Sylmar, CA, 800.572.4721, [www.marcosealer.com](http://www.marcosealer.com).

**FINANCES: HOME ARMY FROM HOME**  
pp. 64-66



"Chloride Wig," p. 66: The drum machine can cable and a 200-gal water to clear these debris.

Certified public accountants: Richard Koenigsberg, Spitznagel, Koenigsberg & Purkin, LLP, New York, NY, 212.458.1208.  
Insurance consultant: Andrew Scherren, AMS Risk Management & Consulting Inc., Rockville Centre, NY, 516.336.4413.  
Real estate attorney: Mitchell Jans, New York, NY, 212.271.0708.  
Mortgage broker: John Tiedt, IN Personal Systems, New York, NY, 212.631.1225.  
For further reading: The Doe Dinkle Company: Book of Money by Stephen M. Pollak and Mark Lerner, Harper Business, 3300.

**UPKEEP: BLACK MAGIC**  
pp. 70-72

Driveway sealing contractor: Jon's Drive Way Sealing, Yorkville Heights, NY, 914.963.9704.

Sealing products: The Sealer Company, Chicago, IL, 800.397.1984, [www.sealerco.com](http://www.sealerco.com).  
For further information: National Asphalt Paving Association, Lanham, MD, 301.721.4740.

**FURNITURE TRENDS 2001: LIVING LARGE**  
pp. 76-82

Page 76, American: Cora del Sol from Ralph Lauren Home, 800.578.7936.  
Page 79 (clockwise from top left):  
Sofa: Lennenberg from Irene Hongway Collection, Thousand Oaks, 800.837.9332, [www.lennenberg.com](http://www.lennenberg.com).  
Modular corner sofa: Flipper from Joe Buggen Collection for Sternberg Furniture, 677.776.2483, [www.sternbergfurniture.com](http://www.sternbergfurniture.com).  
Square dining table: 931.8568 RTJ from Naitica Home Collection, Longport, 800.529.4436, [www.kongport.com](http://www.kongport.com).  
Both American: Kent from W/launberg Peer Single Table Collection, Lute, 800.780.4363, [www.luteinterior.com](http://www.luteinterior.com).  
Page 80 (clockwise from top left):  
Dining table: 604.989.8706 Round Pedestal Dining Table from Marica Home Collection.  
Wing chair: Longport Seagrap from Royal Poles Collection, Baser International, 800.382.7899, [www.baserinternational.com](http://www.baserinternational.com).  
Spot table: Milling Road, 800.392.2537, [www.millingroad.com](http://www.millingroad.com).  
Plasterer-style single bed, from Tusand Collection, Baser Furniture, Baser, NY, 340.629.6800, [www.baserfurniture.com](http://www.baserfurniture.com).  
Page 83 (clockwise from top left):  
Ottoman: #1996 from Barbara Early Collection, Baser Furniture, 800.392.2537, [www.baserfurniture.com](http://www.baserfurniture.com).  
Dining bed: Alexander Johnson at Home, 800.776.7948.  
Two-door dresser: Eddy West, 800.629.9637, [www.radywest.com](http://www.radywest.com).

**HOMEOWNERS' HANDBOOK: NAMING KITCHEN CABINETS**  
pp. 82-83

Asplix: Bader: Bosch D934415, Mirror Finder Digital Processor/Angle Finder,

773.286.7136, [www.kosha.com](http://www.kosha.com).  
Then saw: Bosch Trench Prosser Saw 1640V, 773.286.7338, [www.boschtools.com](http://www.boschtools.com).

**WEST PALM BEACH**  
pp. 94-106

Architect: Roger Johnson, Dickey & Partners Architects, P.A., West Palm Beach, FL, 561.640.5240.  
General contractors: John Kern and Harley Edgar, Kern Construction, West Palm Beach, FL, 561.626.9323.  
Landscape designer: Jeffrey Blahy, Blahy and Associates Landscape Architects and Planners Inc., Palm Beach Gardens, FL, 561.627.4943.  
Interior designer: Rob Thompson, Jack Dendron Inc., West Palm Beach, FL, 561.639.0633.  
Roofing contractor: Joe Hirt, Carpenter's Roofing and Sheet Metal, West Palm Beach, FL, 561.433.0340.  
Electrician: Rick Rose, Capstone Electric, West Palm Beach, FL, 561.640.0400.  
Marine window: PGT Industries, Vero, FL, 888.352.5019.  
Marble contractor: Joseph Tassone, Tile Work Inc., West Palm Beach, FL, 561.633.9035.

Kitchen faucet: Chicago Faucets, Chicago, IL, 847.509.8000.  
Kitchen sink: E. Kay, Chicago, IL, 630.274.9491.  
Kitchen cabinets: Master's Kitchen Gallery, Palm Beach, FL, 561.688.9625.  
Blind: Kenderlin Inc., Blue Lake, WI, 715.234.1111.  
Highway Woodworks Inc., Matigosa Park, FL, 561.688.9625.  
Kitchen floor: Anselmo Flores, West Palm Beach, FL, 561.433.6720.

**GREAT WRITERS: A PORTRESS OF ONE'S OWN**  
pp. 106-114

Glade or dismount, p. 110:  
The Secrets of the Portress of Solwele  
1. Portress container: Portress is hidden in the Arctic, and its container is the side of a new-corned moon.  
2. Portress key: The great key, designed as an airplane, is in heavy duty Super steel can left to us to unlock the Portress.  
3. Trophy room: Abounds with treasures of

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# The Secrets of the Fortress of Solitude



"A Fortress of One's Own," p. 118. Writer Michael Chabon, inspired by the idea of a superhero's private den, built a private refuge in his imagination. This original diagram from DC Comics is a guide to Superman's Fortress of Solitude.

missions performed all over the Universe.

4. **Superman room.** One of several rooms in the fortress dedicated to friends of Superman. In the Superman Room are statues of both Superman and Clark Kent.

5. **Thomas & Rachel room.** Built in honor of those famous cousin grandsons, Batman and Robin.

6. **Super-mural.** This mural, painted by Supermen, shows how he once created an entire solar system all by himself!

7. **Supergirl room.** Dedicated to Superman's cousin from Krypton, Kara, also known as Linda Lee.

8. **Atomic-powered robot.** There's nothing Supermen enjoys more, when he doesn't exercise, than to have a rag of war with his atomic-powered robot.

9. **Joel D and Lars andway.** The archway is formed by statues of Superman's parents and a model of his home world, Krypton.

10. **Mrs. & Mr. Kent room.** Dedicated to the kindly foster parents who adopted Superman when he landed in Smallville.

is a lady.

11. **Daily Planet room.** A replica of the office in which Superman works in his secret identity as reporter Clark Kent.

12. **Kal-El's.** The city of Krypton once existed on Krypton, but was shattered into a rubble via a rotating ring by space-villain Kryptonite. Some day Superman hopes to relocate Krypton back to its original state.

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## GOING THE KIDS & BATH

pp. 118-120

General contractor: Frank Corone, Rockcon.com, NE, 631-941-0597.  
Shower tiles: Oceanic Glauco, Hastings Tile & Bath, 800-321-8036, www.hastingstilebath.com.  
Shower valve: Grohe America, Bloomington, IL, 630-340-7781; www.groheusa.com.

Hard showing: Hastings, 800-334-0455, www.hastings.com.  
Sink hardware: Stone, Hastings Tile & Bath.  
Comm-cut mirror: A World of Mirrors & Glass, Manassas, NE, 714-268-2277.

## GOOE'S TOUR DE FORCE

pp. 124-124

Interior designer: Lee Ann Brack, ASD, Inner Interior Design, San Francisco, CA, 415-621-7362, www.brackdesign.com.  
Project manager: Charles Caruso, Brack Interior Design.  
General contractor: Ken Seywer, Sebastopol, CA, 707-874-1135.  
Marble slab preparation and installation: Basilio Garcia, Marble Turquoise Style, San Pablo, CA, 510-217-4299.  
Marble distributor: Michele Scardina, Picoa Pico, Hayward, CA, 510-670-1060.

Existing contractor: Erik Nader Construction and Flooring, Santa Rosa, CA, 707-586-9243.  
Cabinetry: Classic Cabinets, Sonoma, CA, 707-943-4193.  
Cabinet handles: Aronson, San Francisco, CA, 415-413-6633.  
Kachere: Kachere Custom Copper & Brass Inc., Fairfield, NJ, 973-223-6334.  
Kachere range: La Cornue, www.lacornue.com.  
Making a masterpiece: Steve Evans, Woodacat, CA, 415-488-4333.

## COMING UP ROSES

pp. 126-142

Rosewater: Mike Lown, Lown's Roses, Nashville, NE, 603-838-3214, www.lownroses.com.  
Lucky Plant, Northland Nurseries, Spokane, WA, 509-468-4568, www.northlandnurseries.com.  
For Kachere information: American Rose Society, Sherrington, LA, 318-638-5483; www.ars.org.

## POSTER: BATHROOM SINKS

pp. 145-150

Drawings: wall-mount basin and faucet: Albrico brass and Neotroom faucet, Hastings Tile & Bath, 800-351-0838, www.hastingstilebath.com.  
Back Page, rounder: Batavia Lavatory from Kachere, 800-456-4337, www.kachere.com.  
Inside Pages: (1) Happy D Wall Mount Lavatory, Danvers, 818-387-2840, www.danvers.com.  
(2) Youth Batavia Lavatory, Kohler.  
(3) Crago Above Counter Basin, Faucet by American Standard, 800-324-0777 ext. 199, www.americanstandard-us.com.  
(4) Hancock Basin, Waterworks, 800-899-6357, www.waterworks.com.  
(5) Barbara Berry Dressing Table For Her Room, Kachere, 818-452-1547, www.kachere.com.  
(6) Albrico Wall Mount Basin, Hastings Tile & Bath.  
(7) Antiquity Cast-iron Lavatory,

American Standard.  
Textbook and publisher: New World Academic, New York, NY, 212-460-9190.



"Eden's Ark," p. 142. This month's Poster illustrates rock styles and materials.

With Educational Foundation does not endorse any product or service mentioned or advertised in this magazine.



"Coming Up Roses," p. 118. Climbers and clematis will cover a fence trellis, or arch or even a short roof with a profusion of blooms.

[illegible]



As expected, Milton. The Paradise Club, John Child, costs up kitchen design for the project house until Steve, Milton, Mass., and Steve

**Week 8 (May 8-14)**

TOM REBUILT HISTORY (Continued) After the kitchen was in, the team moved on to the living room. The living room was a challenge for the team because it was a large room with a lot of windows and a fireplace.

**Week 9 (May 15-21)**

Steve investigated the family bed underground structural issues. He found that the foundation was in good shape, but there were some minor issues that needed to be addressed.

**Week 10 (May 22-28)**

Steve investigated the family bed underground structural issues. He found that the foundation was in good shape, but there were some minor issues that needed to be addressed.

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**Week 11 (May 29-June 4)**

Steve and the team worked on the new exterior garage door. They had to make sure it was secure and looked good.

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**Week 12 (June 5-11)**

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